Lecture
ON
THE ANTISEPTIC TREATMENT OF TYPHOID FEVER.

Delivered at King's College Hospital,

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GENTLEMEN,—If in the practice of medicine we should ever be able to establish general laws for the treatment of disease, and introduce scientific accuracy and uniformity into our therapeutic methods, it would certainly be in the treatment of *acute* diseases that we might first hope to attain that desirable end. *Acute* diseases, and especially the infective fevers, present considerable uniformity in the phenomena that accompany and characterise them; they run a tolerably definite course; from their well-defined and nearly constant physical characters their diagnosis is comparatively easy; and, if we are not absolutely certain as to their precise causation, we are far advanced in such knowledge, and we may believe that at no very distant period our knowledge of the etiology of acute diseases will be to a certain extent accurate and complete. It is far otherwise with chronic maladies, the nature of which is often doubtful, their origin and causation obscure, their phenomena extremely variable, and their diagnosis proportionately difficult. We know that in many acute diseases the causative agent is an infective organism, a microbe, introduced into the body from without—a living propagating poison, growing and developing, and multiplying amidst the fluids and tissues of our bodies, and setting up in the process more or less serious disturbances of its functions—disturbances which, in not a few instances, attain such a magnitude as to destroy the life of the individuals attacked. I may remind you that not many years ago the prevailing tendency in the teaching of some physicians of great eminence was that it was useless, or even worse than useless, to attempt to modify the course of these acute diseases by any distinct medical treatment; and their standpoint, although I have always thought it an utterly illogical one, was, tested simply by the appeal to practical results, perfectly defensible. And it had, further, the great recommendation of sweeping away much false theory and bad practice in connexion with the management of acute disease. These physicians bore the same relation to the older schools of medicine that the modern agnostic bears to the theological schools; they practically said, "We do not *know;* we have no *certain* grounds either for belief or action; therefore we neither believe nor act." But this lack of knowledge no longer exists. We know that a great number of acute diseases are caused by the introduction into the body of specific organisms from without, and that the development, activity, and life of these organisms can be modified and influenced by exposure to conditions and agencies over which we have a certain amount of control.

Those, then, who take the same view of acute disease as I do, maintain, as I do, that there are two plain and obligatory indications in the treatment of these affections—one *general* and the other *special*. The *general* indication is to support and strengthen the resisting powers of the organism attacked while it is passing through a more or less grave crisis. The *special* indication is to attempt to diminish the gravity of this crisis by opposing or counteracting the activity of the special morbific microbe with which the organism is infected. To have obtained this latter definite indication for the treatment of infective fevers is already a great advance in therapeutics. We may not yet be in possession of the best means of carrying this indication into effect, but that is only a question of time. The idea of an *antiseptic* treatment of certain forms of disease has been greatly misunderstood or intentionally misrepresented by those who for some inscrutable reason dislike it; and we who have been bold enough to entertain this idea have been credited with the crude intention of attempting to slay these parasitic morbific agents in much the same direct and simple manner as that practised by a certain renowned but still undiscovered operator in the district of Whitechapel! and we have been gravely told that our so-called antiseptic methods are so murderous that our patients and not the microbes fall victims to them.[1]

Now, gentlemen, I have always believed, and I think all biologists are agreed in believing, that the life history and the life activities of every living thing are, to a great extent, determined by its environment, by the physical and other conditions in which it has to live. Almost inappreciable differences (inappreciable to us) in soil or atmospheric conditions will, we know, exert the greatest possible influence over the growth and development of many forms of vegetable life. Every analogy in nature points to the possibility of effectually modifying the life history and activities of all living things by slight modifications of their environment. This, then, is the idea entertained by those who have been searching for methods by which the injurious activities of the living parasitic agents of infective diseases may be modified or counteracted, and we shall continue to search for them, and we shall end in finding them, because, as I have already said, every analogy of nature points in that direction. But there is another mode in which antiseptic agents may avail us. These morbific microbes appear to have the power of determining the formation within the body of certain poisonous animal alkaloids or ptomaines, and antiseptic methods may act either by preventing the formation of these ptomaines or by destroying them when found, or promoting their discharge from the body. The antiseptic idea, then, is a *large*, not a *small*, one, and is by no means to be confounded with mere microbicide; and we may hope it will cease to be represented as such. The idea of an antiseptic treatment of typhoid fever is by no means a new one, so far certainly as intestinal antisepsis is concerned. Sir William Jenner, in his admirable paper on the Treatment of Typhoid Fever, published more than ten years ago,[2] says: "When the stools are very offensive, correctives of fetor should be given. A teaspoonful of charcoal may be given two or three times a day ..... other correctives of fetor or antiseptics will have as good effect, but this has given me such satisfactory results that I have not resorted to other remedies." We now possess intestinal antiseptics which were hardly thought of or known then, less cumbrous and more effective than charcoal. Murchison formulates as the first indication of treatment to "neutralise the poison and improve the state of the blood,"[3] and he says *antiseptic* agents "have this to recommend them, that they might be expected to act directly on the poison in the intestinal canal." Niemeyer, like Murchison, commends the administration of dilute chlorine water in typhoid fever. Sir Thomas Watson, in whose time the remarkable antiseptic power of the salts of mercury was unknown, says, in speaking of the treatment of continued fevers: "In the fevers which I treated, or saw others treat, in London prior to the appearance of the more recent epidemics, mercury in one shape or another was almost constantly prescribed, and a great number of the patients were brought, sooner or later, under the specific operation of that mineral, and in these patients (with one exception only, where the mercury appeared to do neither good nor harm) a decided improvement was almost immediately apparent upon the supervention of soreness of the mouth, and *all such patients ultimately recovered.*" In these cases a rigorous antiseptic treatment had been applied unconsciously and empirically. But one of the most remarkable testimonies on record to the value of antiseptic treatment in typhoid fever is to be found in the admirable paper of Dr. Wilks, of Ashford, published in the *British Medical Journal* so long ago as 1870. Dr. Wilks had encountered in his neighbourhood a widely spread and severe epidemic of typhoid fever. The earliest cases were mild, and did well with merely expectant treatment, but soon they assumed a more severe type, and were difficult to manage. Dr. Wilks had heard of the utility of creasote in such cases, and he therefore tried it, and with good results; but it nauseated some of the patients, and they objected to it. The case of a strong, healthy, active and temperate man, who died within seven days of being first seen, and whose body putrefied so rapidly that it was difficult to come near it within twenty-four hours after death, and almost

[1] "By treating patients in various ways by antiseptic remedies, the result has been that the patient, and not the bacillus, has succumbed." Latham, Harveian Oration, October, 1888.
[2] THE LANCET, Nov. 15th, 1879. [3] Murchison on Fevers.

impossible to approach the coffin at the funeral sixty hours after, so impressed Dr. Wilks with the activity of the putrefactive agent or agents within the body, that he determined henceforth to introduce some powerful antiseptic substance into the treatment of these cases. He called to mind the value of solutions of chlorine in scarlet fever (he feared the depressing effect of carbolic acid); but he thought that for another species of fever poison another kind of antiseptic might be better, and he thought of sulphurous acid. He tried it in some very severe cases, and the results surprised him. It quickly allayed vomiting and purging, reduced tympanites, supported the pulse, moistened the dry tongue, and relieved thirst. He administered it in 170 cases in fourteen months with signal results. There was only one death, and that a habitual drunkard, who would not take his medicine. The acid was given in doses of from three to twenty minims, according to the age of the patient, every four hours, and continued for a week or ten days, or even more, "until the patient complains of tasting, smelling, and feeling like sulphur or lucifer matches, or, in the case of infants, until they actually emit an odour of the gas from their skin and breath." At this point it was stopped. For adults twenty minims of sulphurous acid mixed with two tablespoonfuls of water and a little syrup of orange-peel every four hours was the usual prescription.

"I will state distinctly," says Dr. Wilks, "what I claim for sulphurous acid in typhoid fever: that it arrests the further development of the fever poison, and, by continuing this arrest long enough, exterminates the fever. Briefly, it is an antidote. ..... In some of my early cases I left off this acid after a few days' use, because the patients seemed better. In almost all such cases they had a relapse, which was again immediately arrested on the resumption of the acid. Very possibly," he concludes, "I have failed to convince you of the advantages of using this drug, but let me again remind you of the plain fact that of 173 cases of this fever occurring in our practice during the past fourteen months, two only died, and those two did not take the acid; for the one it was not prescribed, the other was a drunkard and would take nothing. Of the 171 who took sulphurous acid, not one lost his life, and there were few who were not convalescent within fifteen days of commencing the treatment." Two well-known practitioners in Dr. Wilks' neighbourhood called my attention some years ago to this mode of treatment, and testified to its invariable success in their own practice. I took an early opportunity of testing it, and reported some of the results in the *Practitioner* of June, 1882. It was not so successful in my hands as another method has proved, which I shall presently describe. In one case severe hæmorrhage came on during its administration, which had to be controlled by other means; this case ultimately did well. It was a case in which there had been some difficulty in diagnosing the disease on account of the mildness and indefiniteness of the early symptoms, and so the remedy was not commenced until somewhat late in the course of the fever.

In another case which we had selected as a test for this treatment, on account of its severity, the patient died from perforation on the twenty-ninth day of the fever. He was a nervous man, and was suffering from great nervous depression and sleeplessness before the fever attacked him, because his wife and two children were laid down with typhoid fever. Even in this case the modifying influence of the remedy was very remarkable when first administered. On the fourth day of the fever, when the evening temperature was 104°, he began the sulphurous acid in half-drachm doses every four hours. For the next five days the temperature ranged between 102° and 104°, and on the sixth day of taking the acid there was a notable fall in the temperature curve, and for the next three days it did not rise above 102°; then there was another fall, and for the next six days the temperature reached on one occasion only 101°. The remedy appeared to be modifying in a remarkable manner the course of the fever. There was no diarrhœa, no abdominal tenderness or distension. The general condition was good, except that he was always nervous, depressed, and apprehensive—an evil prognostic On the nineteenth day he began to complain of abdominal pain, the temperature rose again, and reached 104° in the evening, and remained so for the rest of the illness; the abdomen became distended, there was diarrhœa, and on the twenty-fourth day, as the remedy appeared to have no longer any influence over the fever, it was discontinued. He began to have hæmorrhage from the bowels with the diarrhœa on the twenty-sixth day, and on the twenty-ninth day he died somewhat suddenly with symptoms of perforation. On post-mortem examination there were found several large and deep ulcers in the ileum, and four of them had ulcerated completely through the intestine, and there was considerable extravasation of fæces into the peritoneal cavity.

I have dwelt on this case because it showed that, notwithstanding the favourable influence of the antiseptic agent on the early course of the fever, the local lesion went on, apparently uncontrolled, to a fatal termination; and this, under any form of treatment, we must of course be prepared to occasionally encounter. This patient, moreover, was suffering from such marked nervous depression before he was attacked with fever that he was not a hopeful case from the outset. For the first fortnight his bowels were rather disposed to be confined, and it might have given him a better chance if, during the first few days of the fever, his intestinal canal had been swept clean by two or three doses of calomel. I did not pursue the sulphurous acid treatment in any more cases, chiefly because I have adopted another antiseptic agent which I like better, and which I shall presently describe to you. Mr. Kesteven of Brisbane reported in the *Practitioner* of May, 1885, his conviction of the great value of the oil of eucalyptus in the treatment of typhoid fever, and he repeats that conviction in another communication to the same journal in April, 1887. He states that he gave it in 220 cases, many of whom had a "bad start," and that he had only four deaths! His dose was from five to ten minims of the oil, made into an emulsion with mucilage, every four hours; and he combined with it half a drachm of sal volatile, half a drachm of spirits of chloroform, and half a drachm of glycerine. By this means he made it more agreeable to take, and the glycerine covered the rough gum-resinous taste of the eucalyptus oil. He noted as results of this treatment a reduction of the pulse, a remarkable lowering of the temperature, a rapid cleaning and moistening of the tongue; the skin became soft and moist, and the duration of the fever was greatly shortened. An omission of the remedy was attended by a return of the unfavourable symtoms. The alvine evacuations smelt of the oil, so that intestinal antisepsis was no doubt a consequence of its use.

Parallel with these observations of Mr. Kesteven on the value of oil of eucalyptus in typhoid fever, I should like to place Professor H. C. Wood's testimony as to the usefulness of oil of turpentine in the same disease. He says, "Many lives would be saved if the oil of turpentine were more freely used in this disease. ..... The volatile oils are absorbed slowly, and are rapidly vaporised at the temperature of the human abdomen, so that there can be no reasonable doubt that, either in the form of liquid, or more probably in the form of vapour, when given freely by the mouth, they get into contact with the mucous membrane of the upper intestine." He gives it in every case, beginning about the twelfth day of the fever, and the following is the formula he adopts: Oleum caryophylli, gtt. vi.; oleum terebinth., ℥ iss.; glycerini, mucilag. acaciæ, āā ℥ss.; syrupi et aquæ ad ℥iii.; a dessert-spoonful to be given every two hours during the day, the patient being allowed to rest during the night. The use of camphor in typhoid fever, not only as an excellent antiseptic, but also as a cardiac stimulant, has been highly commended by Dr. Janeway of New York; and its very slight solubility in water ought to ensure its local antiseptic action in the small intestine. The administration of creasote both by the mouth and in enemata was warmly advocated by Pécholier of Montpellier, and he maintained that when begun early it diminished the intensity and shortened the duration of the fever. Thymol has been given by Dr. F. Henry with the same object; he gives a grain and a half or two grains made into a pill with soap every six hours. Owing to its insolubility it passes, he says, into the intestines, and there neutralises toxic ptomaines which result from gastro-intestinal catarrh. He has found it lessen diarrhœa and lower temperature. The Italian physician, Testi,[4] has also given thymol in 150 cases of typhoid with good results; he noted a lowering of the temperature, disinfection of the intestinal tract, and a diminution of diarrhœa and tympanites. Likewise a notable diminution in the products of putrefaction developed in the intestine and eliminated by the urine. The importance of attempting

[4] Allg. Wien. Med. Zeitung, No. 9, 1889, p. 90.

to establish intestinal antisepsis in the treatment of typhoid fever has been especially insisted upon by Professor Bouchard and Professor Grancher, two distinguished professors of the Medical Faculty of Paris, and I will now call your attention to some of their conclusions and to the methods they adopt.

Professor Bouchard[5] encountered much difficulty at first in finding a suitable non-irritating antiseptic agent for this purpose. He tried charcoal as recommended by Sir Wm. Jenner, iodoform, carbolic acid, naphthaline, and other substances, but none of them were quite satisfactory. He now uses and recommends β-naphthol, reduced to a fine powder, and mixed with salicylate of bismuth. One hundred and fifty grains of β-naphthol are mixed with seventy-five grains of salicylate of bismuth, and this is divided into thirty powders. From three to twelve of these are given in the twenty-four hours, enclosed in a wafer, and swallowed with the food. The β-naphthol has the advantage of being very slightly soluble in water, but it is a powerful antiseptic; it therefore reaches the intestine, where it acts as an intestinal antiseptic. Professor Bouchard finds that it certainly deodorises the evacuations. He insists also on the administration of quinine, which he contends (and in this contention I am disposed to agree with him) acts as a *general* antiseptic. Eberth has shown experimentally that quinine is one of the most powerful antiseptics against the typhoid bacillus, and checks its culture. Professor Grancher, Pécholier of Montpellier, and Voit of Berne, have all published excellent clinical results from the administration of quinine in typhoid. Bouchard considers its action in lowering temperature in this fever to be antiseptic rather than antithermic. His method, then, of treating typhoid fever consists in the use of both a local and a general antiseptic. He checks intestinal putrefaction by means of intestinal antisepsis, and he antagonises the infective agent in the blood by means of quinine chiefly. He gives some statistics of the treatment of typhoid cases at the Lariboisière Hospital, with which he is connected. From 1854 to 1885, 12,246 cases were treated, with a death-rate of 21·15 per cent. In the same hospital, in the last four years, he has treated 390 cases and lost 46, a mortality of 11·79 per cent. He states that his mortality only amounts to two-thirds of the whole mortality rate of the other cases of typhoid fever treated in the hospital during the period in which his method has been applied in his service alone. Bouchard gives the quinine in larger doses than have appeared to me to be necessary; for I also am an advocate of the use of quinine in typhoid fever. He gives it after this fashion: during the first fortnight thirty grains are given in the evening, in four equal doses of seven grains and a half each, every half hour, at intervals of three days. Of course, these intervals reduce the total quantity of quinine to the moderate average of ten grains a day. In the third week the thirty grains are reduced to twenty-two grains, and in the fourth week to fifteen grains. Professor Grancher in treating typhoid fever in children gives quinine in the same manner. At five years of age he gives from fifteen grains to twenty-two grains and a half, divided into three doses, every half hour, at about 5 or 6 P.M. He finds that this method has the advantage of procuring the child sleep during the night, and that the child wakes refreshed and cheerful, with a fall of temperature of from 2° to 4° F. He asserts that its effects with children are remarkable, and he believes it to have a specific antiseptic action in typhoid fever. Dr. Clement Cleveland of New York[6] has also recorded his experience with quinine in typhoid fever. He believes it cuts short some cases of the fever, if it is begun early and given in from five to ten grain doses every fifteen minutes for two hours, his idea being the same as Bouchard's—viz., to saturate the system rapidly with quinine, and then leave an interval. He also at other times gives from five to ten grains every two or three hours, and he points out that as quinine is rapidly eliminated it is necessary to keep the system under its influence. Typhoid fever patients with whom it acts well he has observed recover more rapidly, more permanently, and with fewer sequelæ; and he has been impressed with the fact that the death-rate is much lower with the quinine treatment than with the expectant plan.

Let me point out, again, that this is no *new* observation as to the efficacy of quinine in typhoid fever. If we refer to Sir Thomas Watson's Lectures, at page 855, vol. ii., fourth edition, we find him quoting a Dr. Dundas as maintaining that "quinine in large and frequently repeated doses is a specific cure for continued fevers as we see them here," and after referring to the varying reports of its efficacy received from different practitioners, Sir T. Watson concludes, "But of the cases in which this quinine treatment is reported to have effected cures, some are expressly described as instances of maculated typhus, and others as instances of typhoid fever." What I would say with regard to this is, that when you see a remedy returning again and again into favour, and impressing successive generations of physicians, from time to time, with the idea of its value and efficacy, be quite sure there is some truth in their observations; and that what is needed to crystallise, as it were, into an established therapeutic practice these observations is a central idea—unchanging because true—a generalised induction from observation or experiment; and this idea is furnished us now by the knowledge of the retarding influence which quinine, together with other antiseptic agents, exercises in the development of morbific microbes. As the administration of quinine forms an important part in the method of treating cases of typhoid fever that I have long adopted, I will now describe that method. I have found, as Murchison had done many years ago, that of all antiseptic remedies free chlorine is the most useful. "I have repeatedly found it," says Murchison, "to have a beneficial influence upon the abdominal symptoms," and he describes how a solution of the gas may be readily obtained. I follow his plan, but I prefer rather different proportions. Into a twelve ounce bottle put thirty grains of powdered potassic chlorate, and pour on it forty minims of strong hydrochloric acid. Chlorine gas is at once rapidly liberated. Fit a cork into the mouth of the bottle, and keep it closed until it has become filled with the greenish yellow gas. Then pour water into the bottle, little by little, closing the bottle, and well shaking at each addition until the bottle is filled. You will then have a solution of free chlorine, together with some undecomposed chlorate of potash and hydrochloric acid, and probably one or two bye products. I greatly prefer this preparation of chlorine to the liquor chlori of the British Pharmacopœia; it is much pleasanter to take, and I have had much better results with it. To twelve ounces of this solution for an adult I add twenty-four or thirty-six grains of quinine, and an ounce of syrup of orange peel, and I give an ounce every two, three, or four hours, according to the severity of the case—that will be from twelve to thirty-six grains of quinine in the twenty-four hours, according to the case. I have for some years past treated all my typhoid fever cases, except the very mild ones, which have not appeared to me to require any active medical treatment, on this system. They have not been very numerous, but they have been *consecutive* cases, and they have all done well.

In giving this mixture to a typhoid fever patient one of the first results you will notice is a remarkable cleaning of the tongue. You will scarcely ever find a dry, dirty, thickly-coated tongue in a patient who has been early put on this mixture. Another most important change has been noticed again and again, and reported to me by the nursing sisters in our hospital: it is that the fetor of the evacuations, which have often been very offensive, will usually disappear within twenty-four to forty-eight hours of the commencement of this treatment. Now this appears to me to be a very interesting and important point. We should expect that this mixture would be wholly absorbed in the stomach, and that it would not reach the lower part of the small intestine directly. Yet it certainly exerts an antiseptic action on the intestinal contents. May it not be that it exerts its antiseptic influence in the blood and there encounters and neutralises some septic substances generated by the typhoid bacillus so that the excretions into the intestine are modified, and so an antiseptic effect on the intestinal contents is produced? In this way we not only obtain *intestinal* but also a *general* antisepsis. The illustrative cases I am about to submit to you have enabled us to observe the following effects as resulting from this treatment:—1. A modification and sustained depression of the febrile temperature. 2. An abbreviation of the average course of the fever. 3. A remarkable maintenance of the physical strength and intellectual clearness of the patient, so that there has been far less need of stimulants. 4. A greater power of assimilating food. 5. A remarkable cleaning of the tongue. 6. A deodorisation of the evacuations. 7. A more rapid and complete convalescence.

(To be concluded.)

[5] Thérapeutique des Maladies Infectueuse. Paris, 1889.
[6] New York Medical Record, Nov. 20th, 1886.

ON THE PHYSIOLOGY OF ASPHYXIA AND ON THE ANÆSTHETIC ACTION OF PURE NITROGEN.

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(*Concluded from page 760.*)

THE explanation which I have before given of these facts appears to me to be the true one—viz., that during the later stages of asphyxia, when the blood has become entirely deoxidised, the pulmonary arterioles contract and cause the extreme distension of the right cavities, with anæmia of the pulmonary capillaries and a corresponding defective blood-supply to the left cavities of the heart.

[The extreme distension of the right cavities of the heart while the left are flaccid and comparatively empty, the minute tissue of the lungs being pale and bloodless, clearly indicates an impediment to the flow of blood between the right ventricle and the pulmonary capillaries. Such an impediment is explained by the contraction of the pulmonary arterioles—the vaso-constrictors of the lungs. It appears to me that the phenomena of asphyxia afford a more complete proof of the powerful action of the pulmonary vaso-constrictors than can be derived from any kymographic tracing.]

I venture to suggest the following explanation of the increase of blood pressure in the pulmonary veins, which has been observed by Mr. Martin and other experimenters during the successive stages of asphyxia. In the first stage, when, with high systemic arterial tension, the left cavities of the heart are distended (Fig. 1), there must be a backward pressure in the pulmonary veins, extending, perhaps, as far as the pulmonary arteries.[1] It is probable, however, that a concurring, if not the main, cause of the pulmonary venous pressure which continues and sometimes increases in the second stage of asphyxia, when the systemic arterial tension and the distension of the left cavities have passed away, is the compression of the pulmonary veins by the extreme collapse of the lung which occurs when the chest is opened in order to introduce a manometer into one of the pulmonary vessel trunks.[2] It is an acknowledged fact that the comparatively slight compression of the pulmonary veins which occurs towards the end of an ordinary expiration lessens the flow of blood into the left side of the heart. The degree of impediment to the pulmonary venous current which is thus occasioned must, however, be very much less than that which results from compression of the veins by the elastic force of the collapsed lung when an opening has been made in the wall of the chest.

Lastly, it is probable that yet another hindrance to the onward flow of blood in the pulmonary veins in the second stage of asphyxia is the impairment in the suction power of the left auricle, partly by anæmia of the cardiac tissues consequent on contraction of the arterioles, both pulmonary and systemic, the coronary included,[3] and partly by the fact that the small amount of blood with which the heart is supplied is more or less completely deoxidised.

[The facts and considerations here stated appear to me to explain the circumstance that, whereas the immediate effect of contraction of the systemic arterioles is a fall of pressure in the systemic veins, no such fall of pressure has been observed to occur in the pulmonary veins when the increased blood pressure in the pulmonary artery and anæmia of the capillaries indicate that the vaso-constrictors of the lungs are impeding the onward flow of the blood. As there is a direct relation between the anæmia of the minute vessels of the lungs and the collapse of those organs when the chest is opened, and as the anæmia is the result of contraction of the pulmonary arterioles, it is obvious that the greater the resistance resulting from this arterial contraction the greater will be the pressure to which the pulmonary veins will be subjected by the elastic tissue of the collapsed lungs.]

With reference to the innervation of the pulmonary vessels, Drs. Bradford and Dean have proved not only the existence of pulmonary vaso-motor nerves, but also that they leave the spinal cord higher up than the systemic vaso-motor nerves.[4] True, these authors remark that "it is probable that the pulmonary vaso-motor mechanism is but poorly developed compared with that regulating the systemic arteries." It would, however, be a strange and incredible physiological anomaly if the vessels of an organ through which the entire blood of the body has constantly to pass had not the same regulating and resisting power, compared with the force of the right ventricle, as that possessed by the systemic arterioles.

Mr. Martin has found, by introducing a manometer into a branch of the pulmonary artery of a moderate-sized cat, while the remaining branches are suddenly obliterated, that the blood pressure in the pulmonary artery rose from 17 mm. of mercury to 36 mm. But neither this nor any other experiment which has been hitherto devised can accurately measure the resisting power of the pulmonary arterioles or the actual force of the right ventricle, for the obvious reason that the arrest or great diminution of the pulmonary circulation enfeebles the muscular walls of the heart by cutting off the blood-supply through the coronary arteries.[5] Mr. Martin has also found that during the last stage of asphyxia the pressure in the pulmonary artery is nearly doubled, while that in the carotid is rapidly falling. That the pulmonary arterial pressure is somewhat less in the last stage of asphyxia than when the artery is suddenly and mechanically compressed seems to be explained by the fact that while in the latter case the blood in the coronary vessels is arterial, in the former the muscular walls of the heart have been weakened by the gradually increasing venosity of their diminished blood-supply. Indirect though weighty evidence in support of the theory that the anæmia of the pulmonary capillaries, with distension of the right cavities of the heart, in the last stage of asphyxia is the result of extreme constriction of the pulmonary arterioles is afforded by the well-known fact that immediately after the readmission of air to the lungs there is a great and instantaneous increase of the systemic arterial blood-pressure; the most probable explanation of the phenomena being that the reintroduction of air into the lungs causes, through the vaso-motor nerves and centre, relaxation of the pulmonary arterioles, as a result of which the blood which had accumulated in the trunks of the pulmonary artery and in the right cavities of the heart is forced onwards, at first by the mere elastic resiliency of the distended pulmonary arteries and cardiac walls; while later the vital contractility of the heart is increased, partly by its lessened distension, and partly by an increased supply of oxygenised arterial blood.

[If the arrest of the circulation were the result of paralysis of the heart's walls by the circulation of venous blood, the arrest would be permanent and irremediable, for this theory assumes that, in order to renew the heart's beats, aerated blood must reach the coronary vessels, an event which could not be brought about without the previous restoration of the heart's action.]

I have before stated that the extreme anæmia of the pulmonary capillaries in the last stage of asphyxia and the rapid emptying of the left cavities of the heart, while the right are becoming greatly distended, are facts inconsistent with the theory which assumes that the distension of the right cavities of the heart is a result of backward pressure from the left, consequent on systemic arterial obstruction; and, on the other hand, the *instantaneous* renewal of the circulation by the readmission of air into the lungs is not

[1] This backward pressure will account for the fact mentioned by Drs. Bradford and Dean (Proc. Roy. Soc., vol. xliv., No. 277), that in the early stage of asphyxia there is a synchronous rise of pressure in the systemic and pulmonary arteries. On the other hand, the continued rise of the pulmonary pressure at a later stage, while the systemic pressure is rapidly falling, can be explained only by the action of the pulmonary vaso-constrictors.

[2] See Dr. M. Foster's Physiology, fifth edition, p. 618.

[3] It has been proved by experiment that in the dog speedy arrest of the heart's action is induced by ligature of one of the larger branches of the coronary artery. Lectures on General Pathology, Cohnheim: New Sydenham Society, vol. i., p. 528.

[4] Proc. Roy. Soc., vol. xliv., No. 277.

[5] Dr. M. Foster has done me the favour to direct my attention to a paper by Professor Knoll (Der Blutdruck in der Arteria Pulmonalis bei Kaninchen: Sitzungsberichte der Kaiserlichen Akademie in Wien, Band xcvii., Abtheilung 14, S. 267). In this paper Dr. Knoll describes a method of measuring the normal blood pressure in the pulmonary artery of rabbits, which is less fallacious than the processes which have more commonly been adopted. He divides the sternum and introduces a tube into the trunk of the artery without wounding the pleura. By this means the blood pressure is taken, while normal respiration continues. The author admits, however, that the opening of the mediastinum and the consequent exposure of the root of the artery to atmospheric pressure may be a source of error.

to be explained by the theory of the previous arrest being caused by cardiac paralysis consequent on the circulation of venous blood.

CONCLUSIONS RELATING TO ASPHYXIA.

That the immediate cause of death from asphyxia is the arrest of the pulmonary circulation appears to be proved by the following facts:—1. When the chest of an animal is opened immediately after death caused by ligature on the trachea, the right cavities of the heart are found enormously distended, while the left are comparatively empty. 2. When the heart of an animal is exposed during the progress of asphyxia the right cavities are seen to become distended, while the left cavities, which had been previously gorged, are found to be collapsed and comparatively empty. 3. In the last stage of asphyxia there is a continuous increase of pressure in the pulmonary artery, while the systemic arterial pressure is falling. 4. That the arrest of the circulation through the lungs is due to contraction of the pulmonary arterioles appears to be proved by the influence of agents which are known to paralyse the arterioles—e.g., nitrite of amyl, atropine, and an excessive dose of curare, the effect of which is that deprivation of air is unattended by distension of the right cavities of the heart, and other evidence of obstructed pulmonary circulation, the life of the animal is prolonged for several minutes, and death ultimately results from the toxic action of venous blood upon the cardiac and nervous tissues.

[5. It is an acknowledged fact that these paralysing agents act alike upon the systemic and the pulmonary arterioles, but the successive phenomena of asphyxia are absolutely inconsistent with the idea that the distension of the right side of the heart is a result of systemic arterial obstruction acting backwards through the left cavities of the heart and the lungs.]

THE ANÆSTHETIC ACTION OF NITROGEN ALONE, OR WITH A SMALL PROPORTION OF OXYGEN.

I have elsewhere stated that the phenomena which result from the inhalation of nitrous oxide as an anæsthetic by human beings are strictly analogous with those observed during the early stages of asphyxia.[6] While some writers maintain that the anæsthetic action of nitrous oxide is due to its preventing access of free oxygen to the system, others believe that it has a "specific anæsthetic action." It occurred to me that some light might be thrown upon this subject by the administration of pure nitrogen. Accordingly I obtained from the Scotch and Irish Oxygen Company of Glasgow a cylinder containing 100 cubic feet of compressed nitrogen, in which the proportion of oxygen present was only 0·5 per cent. by volume, with 0·3 per cent. of CO_2. As a preliminary trial, Mr. F. W. Braine was good enough to administer this gas in five instances to members of the staff of King's College, who volunteered to submit to the experiments. The result was in each case the production of complete anæsthesia and of general phenomena precisely similar to those observed from the inhalation of nitrous oxide. Encouraged by these results, Mr. Braine felt justified in administering the gas to patients at the Dental Hospital for anæsthetic purposes. Nine patients took the gas. In every case the result was the production of complete anæsthesia, with general phenomena precisely similar to those observed during nitrous oxide inhalation. The pulse was first full and throbbing, then feeble. In the advanced stage the respiration was deep and rapid, and there was lividity of the surface; the pupils were dilated, and there was more or less jactitation of the limbs. The only difference, in the opinion of some of those present, being that the anæsthesia was less rapidly produced, and somewhat less durable, than that from nitrous oxide, though in each case the tooth was extracted without pain.

On a subsequent occasion the same gas was administered by Dr. Frederic Hewitt at the Dental Hospital. As before, nine patients took the gas. The maximum period required to produce anæsthesia was 70 seconds, the minimum 50 seconds, and the mean time 58·3 seconds. In one case two teeth were extracted without pain. In one case only was pain experienced, and in that case, the tooth having been broken up and not extracted, the patient said she felt a "smashing up." Having on several occasions witnessed the administration by Dr. Hewitt of nitrous oxide mixed with 10 per cent. by volume of oxygen, with the result of producing anæsthesia without lividity or jactitation, I determined to try a mixture of nitrogen with a small proportion of oxygen. I therefore obtained from the company above mentioned a cylinder containing forty cubic feet of nitrogen mixed with 3 per cent. by volume of oxygen, and a second cylinder equally charged with a mixture of nitrogen with 5 per cent. by volume of oxygen. These gases were administered by Dr. Hewitt to patients at the Dental Hospital with the following results:—In the case of the 3 per cent. gas, which was given to five patients, the time required to produce anæsthesia varied from 60 to 75 seconds, the average time being 67·5 seconds. In each case the tooth was extracted without pain, the duration of anæsthesia being somewhat longer than with pure nitrogen. In each case there was lividity, dilatation of pupils, and more or less jactitation. On the same day Dr. Hewitt gave nitrogen with 5 per cent. oxygen to four patients. With this mixture the time required for the production of anæsthesia ranged from 75 to 95 seconds, the average being 87·5 seconds. In each case there was complete anæsthesia, during which one patient had three molars extracted, and although she said she "felt the two last," the sensation appears to have been that of a pull, and not of acute pain. In all of these four cases there was slight lividity before the face-piece was removed, but in only one case was there slight jactitation of the limbs. The other three patients were perfectly quiescent. The experiments here recorded suffice to prove that nitrogen, pure or mixed with a small proportion of oxygen, is as complete and apparently as safe an anæsthetic as nitrous oxide. It is to be hoped that those who are engaged in the administration of anæsthetic gases will investigate this interesting subject further, with a view to ascertain whether atmospheric air, partially deprived of its oxygen, may be advantageously substituted as an anæsthetic for nitrous oxide. For the information of those who may be disposed to enter upon such an investigation, I may state that Brin's Oxygen Company (69, Horseferry-road, Westminster) are prepared to supply nitrogen containing from 4 to 7 per cent. of oxygen at the same rates as they now supply pure oxygen—viz., in quantities of twenty cubic feet or less at 4*d.* per cubic foot, of twenty to sixty cubic feet at 3*d.* per cubic foot, and of over sixty cubic feet at 2½*d.* per cubic foot, in their own cylinders. Below 4 per cent. of oxygen, nitrogen could be supplied only by special arrangement, and probably at increased cost. As before stated, I obtained the gas employed in my experiments from a Glasgow firm, and its cost was therefore increased by the expense of carriage from Scotland.

Savile-row, W.

[6] Essay on Asphyxia, p. 30.

BUBBLE REMEDIES IN AURAL SURGERY.

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IT is probable that all departments of medicine or surgery are more or less liable to the introduction of what may be termed "bubble remedies" (using the word "bubble" in the same sense as it applies to companies), but naturally my cognisance of them is chiefly confined to what I learn from patients with whom I am brought in contact in the practice of my own specialty. If I could repeat a half of their experiences as related to me from time to time during the past few years, the belief in the credulity of mankind would become even greater than it must be even now amongst men who have great knowledge of the world. As might be anticipated from their nature, the life of these bubble remedies is brief, their end is occasionally sudden, and the recollection of them soon fades away; but it is, I am sure, not altogether useless to occasionally subject them to the light. They remain in the air for considerable periods before they attract attention, and then their existence is made known by the voices of those who have invested their hopes in them. In the ordinary course of events the history of any new remedy in medicine or surgery includes a trial at a hospital, a discussion at a society where physicians and surgeons give the advantage of their experience and knowledge to aid the introducer and to criticise his conclusions. A fair trial is given at other hospitals, and it lives or dies according to the measure of its usefulness. It is very different with the bubble remedy. Its origin is at times singularly unobtrusive, and private patients have the inestimable, or questionable, advantage of an early trial. Its constitution is at

this period of its life too delicate to be submitted to the full blaze of criticism above alluded to. At another time a small pamphlet is greatly circulated, or a few cases (in which it has been tried, rather, it would appear, for the relief of a symptom than a pathological condition) are reported in a medical journal. These are more suitable methods of introducing it to the world. What is better still, is that it should have been at some time previously tried by some well-known man of good reputation and subsequently abandoned. It then has an air of respectability, and so resembles an after-birth of a child who has failed to survive.

I will mention only a few examples. It seems almost incredible, but is no less a fact, that during the past year or so a company was floated in the City of London, with a capital of £100,000, the avowed purpose being to purchase a business which possessed the exclusive right of selling what were termed "artificial ear drums" it is now over fifteen years since the use of Toynbee's artificial membrane (at the time an excellent contrivance in cases of perforation of the tympanic membrane) has been given up by aural surgeons in favour of improved methods. Now practically any form of artificial membrane that is advocated presupposes that all perforations which require protection and pressure can have them usefully applied by one form, the fact being that each perforation requires management to be acquired only by experience, after careful examination, and, when any support of the kind is wanted, it must be regulated by the patient, his sensations being the guide in regard to pressure. Also many perforations are quite intolerant of all forms of artificial covering or pressure. However, in regard to these "artificial drums," at first some time was spent in advertising a simple modification of Toynbee's artificial membrane (which, under another name, was to cure every conceivable sort of ear trouble), by means of a pamphlet full of testimonials, the value of which may be judged by the fact that the inventor quoted a long passage from one of my lectures published in 1873, leaving it to be inferred that it applied to his "ear drum" By and by the bubble was floated. The next episode in its history was an account of a meeting of the company, the vendor occupying the position of chairman. It appeared from the report that the harmony of the proceedings was somewhat marred by the presumption of an inquisitive shareholder; and I have not seen any account of subsequent meetings. That these ear drums had a considerable sale I am sure, since numbers of persons who have consulted me had bought them, I am bound to say generally when they had no perforation at all; for if by chance they had perforations of such a kind as would receive benefit by Toynbee's artificial membrane, their hearing might probably have been helped by the use of this imitation. Now, it was in this fact that the fractional good so necessary for the success of this venture is to be found, for who could doubt that, if some deaf people could be made to hear better, it might be the case with all? So much for the ear drums, and now for electricity.

In July, 1889, when speaking on the subject of tinnitus, I said: "Perhaps because tinnitus due to degeneration and some other causes is of a constant character, the kind of electricity which finds favour amongst its advocates is the constant current; but whether this or the interrupted is employed, it is generally the personally conducted and continuous as long as possible." This is no doubt perfectly true, but I still think that for a long though fitful life amongst all bubble remedies, for the ear at least, electricity will maintain the leading position. I will endeavour to show why this is by an illustration. Before doing so, however, lest there should be any misapprehension as to my meaning, I wish to state most emphatically that my remarks apply absolutely and entirely to the unscientific use of electricity, and it is most necessary to state this, since the scientific use of this force has achieved so much in both surgery and medicine during recent years. When the tympanic cavity becomes the seat of acute inflammation, if the aqueduct of Fallopius is destroyed by caries, the portio dura within it is also destroyed, and facial paralysis is of course in this case permanent. If, however, the inflammatory process is of a more limited character, the facial palsy recovers either completely in a period to be counted by weeks or months, as the inflammatory products around the nerve disappear. Since many of these cases are subjected to electricity, those persons who recover naturally attribute it to the treatment adopted. Perhaps it may be said that this process of reasoning applies so often to many other remedies employed in those forms of disease which have a tendency to recover, that it is unfair to suggest the possibility of the facial palsy getting well in the same time as if there had been no electricity. It is, however, difficult to understand how a current of electricity passed through muscles can expedite the absorption of inflammatory deposit in the aqueduct of Fallopius any more than in hemiplegia it could expedite the changes in a blood-clot in the brain. The same order of events—viz, treatment by electricity, and, if recovery, this attributable to treatment—takes place in so many nervous and inflammatory troubles connected with the ear that it is employed for all sorts of symptoms due to permanent change in tissue down to a general tinnitus, which often comes with atheromatous arteries, the results being the same *minus* the recovery. It is thus that an agent intrinsically of great value in surgery becomes a bubble remedy.

Another reason why electricity as a remedial agent will always be more or less in request may perhaps be found in the fact that the minds of many people are peculiarly liable to its fascinations. The idea is present to them that we live in an age of electricity, and anything short of miracles—in which they also believe up to a point—may be expected from it. The knowledge, too, that undoubtedly the use of the electric current is of very real service in some departments in surgery tends to confirm a possibly waning faith It can be applied, too, in such ingenious ways to parts of the body out of sight, and this is an attractive idea. Again, if the process is attended with acute pain, the treatment is apt to come to an abrupt conclusion, but as a set off to this what a delightful revelation it is to find that cocaine can be applied to the aperture which is being acted on—the nose, or some other opening—and any objection on the score of pain may be disposed of. To put the matter briefly, is it not within the experience of most practitioners that those who suffer from progressive disease, or unrelieved symptoms, and who naturally fly to something outside the routine of treatment which they have vainly tried, turn their eyes towards electricity as offering a better chance than most of the empty helps held out to them in their dire distress? The same kind of apparent soundness at the base above alluded to—viz., the recovery *under* treatment, and not *due* to treatment—was to be noted in the wholesale injections of deaf people by pilocarpine, which quite recently took place, but the faith in which has been rudely shaken by a paper in THE LANCET of Jan. 3rd from Politzer, who made the original experiments with pilocarpine as far back as 1879, and who, having subsequently given his experience and views on the subject, now finds it necessary to write in such scathing terms on "the abuse" of this treatment. He there speaks of "practitioners who subject their patients to a long and wearisome course of treatment with pilocarpine," and says, "I feel it my duty to say that they are not too conscientious in the discharge of their calling." It is much to be hoped that this protest will be largely and carefully read, for during the spring and summer of 1890 the condition of patients who consulted me after being injected in this way were almost ludicrous as to the variety of the ailments for which it had been employed. For the most part these people belonged to the unsuccessful division, and included old gentlemen who objected strenuously to senile degeneration, the middle-aged and the young whose hearing was defective from the many causes which unhappily admit of no alleviation, but they included none of whom it could be said they had not given it a fair trial. One young man out of many I especially remember, who in consequence of central changes was impervious to sound of every sort, both before and after he had been subjected to eighty injections, and this was after or before (I forget which, but it is unimportant) a long course of electricity It may not unreasonably be asked why such wholesale injections did not, even before Professor Politzer's protest, elicit an outspoken disapproval of the practice? In the first place, it is a matter of common knowledge that in the secondary stage of syphilis patients often become deaf and completely recover under the ordinary constitutional measures without any especial treatment for the loss of perception to sound, the conducting power remaining good. Those who were injected of course recovered their hearing, and attributed it to the injections In the later stages of constitutional syphilis, or in the inherited variety especially, the course of events is different. In the second place, it must be remembered that the subject of ear affections does not attract the attention of many, and

so they did not feel competent to express dissent or assent in the matter. In the third place, this is not the only occasion when injections of fluid have been practised with insufficient data, even with the highest objects in view. Indeed, have not recent events shown that there was for a moment a danger lest a wave of enthusiasm should swamp the intelligence of the College of Physicians, and this danger was only averted by the better judgment of a majority and the sagacity of its guiding spirit? This I conceive to be the explanation of the limited vitality of the pilocarpine craze—a vitality which has been further limited by Dr. Politzer, who at least, it must be admitted, may fairly claim to set bounds to the employment of an agent which he was the first to apply to ear disease.

The bubble remedy, chameleon-like in its hues, occasionally assumes the aspect of a surgical procedure. In approaching the subject as delicately as possible, let me say I have sometimes hoped it may be possible that there exists in the human mind a faculty—undeveloped unless called into activity—which permits the possessor of it to persuade himself of the inutility and general harmfulness of some portion of the human body (not in the precise instance of his own body, but in that of others). Unless this delusion is within the range of possibility, how are we to explain the determination with which some practitioners extirpate an apparently unoffending portion of the organism for reasons which appear to be not only quite illogical, but which require the profoundest ingenuity even to enunciate? For example, I have been asked to give an opinion somewhat in this way: "I am suffering from [here follow a variety of symptoms which include deafness and tinnitus, but by no means conclude with these troubles]. Do you think I should be cured by the removal of my [right or left] middle turbinated bone?" This upon examination being found quite healthy, the opinion in the negative is given without much difficulty, without the expenditure of many words or any comments. The same question has, I know, been asked of many others besides myself. As a surgical procedure, this operation is outside the pale of serious discussion, and I mention it only as an example of a bubble remedy that the very mention of it may possibly hasten its inevitable bursting.

If this operation or mutilation (whichever the reader may elect to term it) is devoid of plausibility, it was not so with another, which is now defunct—viz., division of the tensor tympani muscle, but which, at the period of its birth and early in its brief and chequered career, attracted considerable attention. The conception was not wanting in brilliancy if the results of the proceeding included dulness (in hearing), and it was easy and reasonable at first sight to imagine that the division of this muscle would relieve permanent tension, especially if it had undergone permanent contraction. I have even heard it alluded to at one of the medical societies in London as a recognised operation. It may have been recognised, but certainly by those who were familiar with its results (and especially by those upon whom it was performed) it was recognised as a failure so far as any change for the better in hearing was concerned, and a very decided change for the worse in the cases which came before my notice. I have elsewhere described it as including in its history "a flight of the imagination, a brief notoriety, and a burial in oblivion so rapid as falls to the lot of few achievements in surgery," and I see no reason to alter this description in paying a tribute to the dead.

Such are some of the bubble remedies which float over the area of aural surgery, but which "vanish into thin air" as they emerge into the clear light of day.

Savile-row, W.

GOUTY FINGERS.

BY EMIL PFEIFFER, M.D., WIESBADEN.

THE celebrated English physician, William Heberden, in his Commentaries, published shortly after his death, about the end of the last century, has a chapter under the heading "De Nodis Digitorum,"[1] the tenour of which runs as follows "Nunquam rite intellexi naturam tumorum, qui interdum nascuntur, ad pisi magnitudinem, prope tertium digitorum articulum. Nihil certe illis commune est cum arthridite; quoniam in multis reperiuntur, quibus morbus ille est incognitus. Per hominis ætatem manent, vacant omni dolore, neque spectant ad ulcerationem. Proinde deformitas major est quam incommodum: quamquam motus digitorum aliquantulum impeditur." From this description these formations have in subsequent publications been named "Heberden's nodes," the name by which they are known at the present day. The accompanying illustration, Fig. 1, taken from a cast in the museum of St. Bartholomew's Hospital, London, and copied from Dr. A. E. Garrod's work,[2] gives a very faithful representation of the affection. Heberden's

FIG. 1.

doubts regarding the formation of the nodes described by him were twofold. While he was unable to determine the exact nature of the materials of which they were composed, as well as the parts involved, he could not arrive at a decided opinion as to the cause of the affection.

As to the first point, we have been informed by the anatomical investigations of Charcot that the nodes arise from exostoses round the heads of the second and third phalanges. These exostoses are well shown by the drawings which this author has published (Fig. 2).[3] It is evident from these

FIG. 2.

a represents the phalanges from the back, and *b* the side view. For purposes of comparison he gives a delineation of the dorsal surface of a normal phalangeal joint, shown in *c*.

engravings that the nodes are formed by real exostoses and have nothing to do with the tophi of gouty patients.

The second point—the etiology of the disease—has given rise to much greater difference of opinion among writers on this subject. From the little that Heberden wrote we may conclude that he had occupied himself mainly with this question, and that his doubts as to the nature of the nodes were, perhaps, essentially connected with their etiology; but he leaves us in no doubt as to his opinion that they have "no connexion with gout, being found," as he says,

[1] Gulielmi Heberdeni Operæ Medica Commentarii, cap. xxviii., 1802.

[2] A Treatise on Rheumatism and Rheumatoid Arthritis. London: Griffin, 1890. Fig. 15, p. 266.

[3] Œuvres Complètes, tom. vii., planche 1, figs. 4, 5, 6. Paris, 1889

"in persons who never had it" The most decided opponent to this teaching is Begbie,[4] who, with reference to the above quoted extract from Heberden's work, writes:—

"Many years have passed since Heberden suggested and answered the question thus proposed, and few, I apprehend, of those who have since perused his writings have felt themselves disposed to differ from him in opinion, and give a different answer. Nevertheless, the question, if I mistake not, admits of a distinct reply; and those little knobs, which physicians in all ages must have noticed and considered, are in reality intimately connected with gout, though they are often found in those who have never experienced a fit of the disease. They are the product of the gouty diathesis; they are the deposits of the gouty blood, and are not less certain indications of the habit than the enlarged cervical glands and irregular cicatrices which mark the deposit and progress of tubercle are of the strumous constitution. Both are guides and landmarks to the inquiring and observing physician; both are eminently suggestive as points of diagnosis and as indications of treatment—not only as regards the individuals themselves in whom these manifestations appear, but as respects the many who may be related to them by ties of kindred blood. I have again and again traced the rise and progress of these little knobs to their full development; I have seen that progress slow and almost imperceptible from year to year, and have seen it equally rapid and observable during the course of as many months. They are occasionally the result of an inflammatory affection of the fingers, more or less acute in its character, and attended by the same constitutional disturbance which marks the fit of gout; but more commonly they are the consequences of a slow and chronic disorder, in which dyspeptic derangement has been chiefly noticed; while occasional twitches of pain in the fingers and a sense of fulness and stiffness there have been the only forerunners of those morbid products which are destined to last through life. They are found chiefly among the upper classes, or among the luxurious and well fed of their dependants, and are seldom or never found disfiguring the hands of the industrious labourer or of the hard-working mechanic. I have never seen these knobs but in connexion with gout or the gouty diathesis, and their presence in the fingers of a patient or of a blood relative has often led me to a right diagnosis of some obscure affection, or been the means of throwing light on the nature of some anomalous symptoms which had baffled all attempts to unravel."

Charcot,[5] on the contrary, is of the same opinion as Heberden, and denies all connexion with gout. From his anatomical investigations he is led to consider the disease to be a special form of rheumatoid arthritis. In numerous cases observed at the Salpêtrière he was able to convince himself that the disease occurs in many persons who had never had an attack of gout, and that the anatomical changes were those of rheumatoid arthritis or rheumatic gout—i.e., degeneration of the cartilages and exostoses. He is, however, compelled to sum up his conclusion with the words: "Enfin ces petites nodosités peuvent coincider avec la goutte, ainsi que j'ai eu moi-même l'occasion de le constater récemment. Dans le cas dont il s'agit les nodosités avaient précédé la goutte de plusieurs années."

Recent English authors (Drs. Alfred B. Garrod, Duckworth, and Archibald E. Garrod) are much less confident as to the cause of the nodes. Dr. Alfred B. Garrod[6] believes Heberden's assertion that "they have no necessary connexion with genuine gout to be correct"; and continues, "As far as my own experience goes, I have very seldom seen them in patients who were sufferers from true gout." Dr. Archibald E. Garrod[7] is of the same opinion; only he adds that he has himself seen such nodes in cases in which there were clear histories of gout, but of no other articular affection." Duckworth[8] goes much further than this. He not only contends that in a good many cases the nodes of Heberden are undoubtedly of gouty nature, but even proves by anatomical facts that the changes in the cartilages and the exostoses found by Charcot are very frequently of an undoubtedly gouty nature. The changes in cases of true gout characterised by deposits of urates may go on to complete bony ankylosis—a result which also occasionally takes place in Heberden's nodes. Duckworth quotes a very striking case (of Dr. Gee), in which the third joints of several fingers were stiffened by bony ankylosis, while all the other joints showed exostoses. In this case not only true fits of gout had taken place, but the post-mortem examination revealed "unequivocally gouty changes with small scattered uratic deposits." The case is minutely described and illustrated by drawings. The same point of view is taken by Lecorché,[9] who says: "Nous croyons que, chez les femmes, en particulier, les nodosités d'Heberden peuvent fort bien être l'indice de la diathèse goutteuse, se traduisant d'ailleurs par diverses manifestations viscérales: asthme, dyspepsie, sciatique, etc., et surtout par les modifications caractéristiques de l'urine et du sang." As instances in point, he quotes the cases of two female patients who belonged to gouty families, and in whom, in addition to the presence of the nodes of Heberden, there were many symptoms of anomalous gout.

For some years past I have observed with special interest the nodes of Heberden on the numerous patients suffering from gout or rheumatic gout whom I see here at Wiesbaden.

FIG. 3.—UPPER PART.

Mrs. Doris N—— of Bremerhafen, sixty years of age.

To my mind the nodes of Heberden, as they are represented in Fig. 1, in the form of small tumours of the size of a pea, are only a part of the changes involving the whole joint. When we consider and examine the first stages of the disease, as shown in Fig. 3, we find that the whole region of the third joint is enlarged, not only on the back, but also on the side and towards the volar surface. On the back of the fingers the usual furrows which mark the regions of normal joints when the fingers are stretched have disappeared, or are even supplanted by an elevation, the whole region of the joint forming a kind of bunch or knob This very singular appearance of the joint becomes still more marked when all the third joints of the hand are similarly disfigured. Even on the volar surface of the fingers the joints can be felt as thickened knobs or pads. In these cases at the commencement the heads of the two phalanges which form the third joint are enlarged on all sides, the nodes of Heberden making their appearance at a much later period of the disease, in the form of large exostoses on the heads of the second phalanges. When we trace the rise and progress of the affection to its full development, we come to the following clinical description: Sometimes peculiar sensations in the fingers precede for a long time the outbreak of the disease. A lady was troubled with a feeling of numbness in the fingers for several years, but no sign of change in the joints could be detected. When I saw her again two years afterwards the numbness still continued, while several of the third joints in both hands

[4] Contributions to Practical Medicine. Edinburgh: Black, 1862, p. 28.
[5] Œuvres Complètes, tom. vii., Paris, 1889, p. 217.
[6] A Treatise on Gout and Rheumatic Gout, third edition. London, 1876, p. 503.
[7] A Treatise on Rheumatism and Rheumatoid Arthritis. London, 890, p. 266.
[8] A Treatise on Gout. London, 1889, p. 71.
[9] Traité de la Goutte. Paris, 1884, p. 122.

showed the changes above described. In most cases pain is present in the beginning of the disease. The statement of Heberden—"Vacant omni dolore"—is certainly incorrect for the first stages of the disease, while all authorities are unanimous in saying that most cases present either spontaneous pain or pain when the joints are pressed or moved.

In cases in which the morbid processes are dying or have entirely died out, as not unfrequently happens with people at an advanced age, the swelling of the joints and the nodes of Heberden remain; but pain in the parts, whether spontaneous or on pressure, becomes entirely absent. The pains are, as mentioned above, generally greatest in the beginning of the disease. The patient from whom Fig. 3 is taken suffered from severe pains for several years. A course of baths which she underwent at Eilsen in Germany gave no relief, and it was not until after a series of baths taken at Wiesbaden that all pain disappeared. The patient from whom Fig. 4 is taken has still very much pain on pressure, although the disease is much more advanced. As time goes on the last joints of the fingers usually become more and more thickened, and ultimately the nodes of Heberden make their appearance, accompanied with various symptoms of a vague or anomalous character. In Fig. 4 the affection is shown in a more advanced stage, and in several of the joints, especially in the little finger of one hand, the beginning of the nodes is distinctly observable.

FIG. 4.

Mrs. H—— of Hamburg, fifty-five years of age.

As the thickening of the heads of the phalanges continues to increase the movements of the joints become more and more impeded, until in the later stages of the disease complete ankylosis becomes established. In some cases the affection shows itself in one or two fingers only, while in other cases all the third joints become involved, the little finger being not unfrequently the first to be affected. In the very rare cases in which the second joints of the fingers become implicated similar changes are observed in the joint of the thumb. I have met with only one instance of this; Duckworth's case above mentioned being another. In other cases the joint of the thumb remains unaffected. I have never observed this affection in the toes.

The persons most liable to be attacked are elderly people above fifty, but I have seen the disease completely developed in a female patient of forty, in whom it had begun at thirty-six years of age. My opinion is in complete accordance with that expressed by Begbie. I consider the affection to be a symptom of true gout, for I have not only seen the disease in a considerable number of cases which had been preceded by attacks of gout, or in which uratic deposits were actually present, but I maintain, in opposition to the opinion of Garrod and Charcot, that this is frequently the case. On the other hand, I must also admit that the disease is found in many persons who have never been subject to gout. From Heberden's point of view the apparent absence of gout in so many of these cases would be a sufficient argument to preclude entirely the gouty nature of the affection; but at the present day we cannot look upon certain morbid processes as having no connexion with gout on such narrow grounds, as we know that many vague and various affections of a gouty nature not unfrequently occur in persons who have never had an attack of gout. The symptoms of anomalous gout are well known to most physicians, especially in England, and in many cases a diagnosis can be established in the absence of decided outbreaks of the disease or of uratic concretions. An acute attack of gout can only be considered as one of the most frequent symptoms of the gouty condition, and not as its invariable and only certain sign. There is a large number of cases in which the most extensive uratic deposits are developed in the absence of acute symptoms or of preceding outbreaks. In the cases in which nodes are developed without acute symptoms of gout or without uratic deposits, a considerable number are found to belong to families in which the gouty condition is hereditary. Begbie and Lecorché quote such cases, and Duckworth relates the case of a physician in whose family the affection was traceable through three generations. In one branch of the family it was found to be clearly connected with gout. A brother of the patient, in whom the disease had shown itself very distinctly, had an acute attack of gout some time ago. But even the pronounced tendency of the disease to be hereditary is in itself a strong argument in favour of its being a symptom of gout. Rheumatic affections are no doubt also hereditary, but never nearly to the same extent. In the former several successive generations of a family will show precisely the same changes, and only these; while in hereditary rheumatism in the parts attacked a marked difference in this respect is seen to obtain. In one generation the disease attacks the hands, in another the large joints, and so on.

I am inclined myself to consider the above-mentioned changes in the third joints of the fingers to be as typical a symptom of true gout as the appearance of an attack showing itself in the ball of the great toe. The fact of its being mainly a disease of advanced life and of the female sex is quite compatible with its gouty nature, for it is to these chronic forms of gout that females and elderly people are more particularly subject. In the male sex and in those in whom the influence of heredity is very strong, outbreaks of gout usually occur at an earlier period than in those who, living more temperate lives, become subject to the chronic forms of the disease at a later period of life. In this connexion I would mention a case described later on, in which both mother and daughter showed the disease. The changes in the fingers appeared much earlier in the daughter than in the mother, a feature which is quite characteristic of hereditary gout. The most conclusive reason which leads me to consider the disease as being of an entirely gouty nature is furnished by chemical examination of the urine. Indeed, in many of these cases the only symptoms of gout which can be detected are those changes which are seen to take place in the urine, and which, as described by me in THE LANCET of 3rd January last, are pathognomonic of that disease, and alone sufficient to establish its diagnosis. I will relate a few cases in illustration of this; with the exception of the fifth they are those in which no acute attacks or other symptoms of gout had occurred.

Mr. P—— of Athens, sixty-one years old, shows Heberden's nodes in one of the third phalangeal joints. The twenty-four hours' urine collected at the first bath was found to be very acid; it contained 0·5988 gr. of uric acid; 100 ccm. of it, passed through a filter with 0·5 gr. uric acid, yielded, with strong hydrochloric acid, only the sixth part, and passed through a filter with 0·2 gr. uric acid only half of the uric acid originally contained in the urine. After the twentieth bath the quantity of the uric acid in the twenty-four hours' urine was seen to be only 0·3544 gr.

Mrs. N—— of Berlin, fifty-three years old, has the described changes in the third joints of all the fingers, which are painful on pressure. The twenty-four hours' urine collected before the first bath was very acid, containing as much as 0·6515 gr. of uric acid; 100 ccm. of it, after filtration through 0·5 gr. of uric acid, yielded only the fourth part, and after filtration through 0·2 gr. of uric acid only the third part of the uric acid originally contained in the urine. After twenty baths the uric acid secreted in twenty-four hours was only 0·3657 gr.

Mr. B——, seventy years old, shows the described changes of the third joints in several fingers. The urine of twenty-four hours collected at the first bath was very acid, containing 0·4440 gr. of uric acid; 100 ccm. of it, after filtration through 0·2 gr. of uric acid, yielded only half of the original quantity of uric acid with strong hydrochloric acid. After the twentieth bath the quantity of uric acid secreted in twenty-four hours was only 0·0154 gr.

Mrs. de S——, from America, fifty-nine years old, has all

the third joints of both hands implicated. The disease began at fifty years of age. The quantity of uric acid secreted in twenty-four hours was 0·4045 gr.; 100 ccm. of the urine passed through a filter with 0·2 gr. of uric acid yielded no trace of uric acid with strong hydrochloric acid. After twenty baths the quantity of uric acid secreted in twenty-four hours was only 0·1699 gr.

Mrs. R——, daughter of the above, thirty-nine years old, has the same changes on the fingers of both hands, the affection having begun five or six years ago. Some years after the beginning of the disease she had the first acute attack of gout in the great toe, which has ever since been a regular occurrence every year. The twenty-four hours' urine collected before the first bath gave 0·4305 gr. of uric acid; 100 ccm., after filtration through 0·2 gr. of uric acid, yielded no trace of uric acid with strong hydrochloric acid. After twenty baths the quantity of uric acid secreted in twenty-four hours was only 0·0318 gr.

Mrs. M——, from Aix-la-Chapelle, seventy years old, shows the described changes in the third joints of several fingers of both hands. The twenty-four hours' urine was very acid, containing 0·1646 gr. of uric acid; 100 ccm. of it, after filtration through 0·5 gr. of uric acid, yielded only some crystals of uric acid with strong hydrochloric acid. After a course of twenty baths the quantity of uric acid secreted in twenty-four hours was 0·0772 gr.

Professor L——, M.D., of Berlin, seventy years old, showed the disease in the third joints of several fingers. The urine of twenty-four hours was very acid, and contained 0·2301 gr. of uric acid; 100 ccm. of it, passed through a filter with 0·2 gr. of uric acid, yielded only 39·3 per cent. of the quantity of uric acid originally present. As the patient came to Wiesbaden only for a short time, the influence of the baths cannot be given.

In these cases it is evident that all of them presented the conditions of urine characteristic of gout, several of them showing, indeed, these urinary changes in a most marked manner; and further, that during a course of baths at Wiesbaden they showed the diminution of the quantity of uric acid secreted in twenty-four hours which I have described in the above-mentioned paper as being one of the most certain tests for latent gout. From all these facts we may conclude that the disease in question *is of true gouty nature and is based only on gout.*

As the nodes of Heberden are only a part of the process, and as the first stages of the disease, which consist in a general enlargement of the heads of the phalanges, are likewise characteristic, the term "gouty fingers" would seem more applicable than "Heberden's nodes," which term should be confined to the nodes at a more fully developed stage of the disease; and a further conclusion may be drawn, that the gouty fingers are of a purely gouty nature, and that in their peculiar clinical appearance, which is in the first stages always connected with changes in, or confined to, the third joints of the fingers, they are as characteristic a symptom of gout as an acute attack in the ball of the great toe.

It is to be noticed that in cases of rheumatoid arthritis in the hands the third joints of the fingers always remain free from changes. But there are cases of gout in which some joints of the hands are involved while the third joints remain free; so, although it can be said that the disease described as "gouty fingers" is a certain proof of gout, we cannot say when there is an absence of morbid changes in the third joints that the gouty condition is not present. Figs. 5 and 6 will serve to illustrate the difference between the cases depicted in Figs. 3 and 4 and those of rheumatoid arthritis. They are taken from two well-marked cases of rheumatoid arthritis. The nature of the disease is not only proved by the clinical examination, but also by the chemical examination of the urine during a course of baths at Wiesbaden.

FIG. 5.—UPPER PART.

Mrs. K——, from Dresden, fifty-four years of age.

FIG. 6.—UPPER PART.

Miss S——, from Wiesbaden, thirty-two years of age.

Mrs. K—— of Dresden, before undergoing a course of baths at Wiesbaden, secreted in the twenty-four hours' urine 0·2805 gr. of uric acid; after twenty baths the quantity of uric acid secreted in twenty-four hours was 0·2754 gr.

Miss S—— of Wiesbaden, previous to a course of baths there in the summer of 1888, secreted 0·1552 gr. of uric acid in twenty-four hours, and 0·2216 gr. after twenty days; and in a second course of baths in the summer of 1890 0·2129 gr. at the first bath, and 0·2152 gr. after twenty days.

In both these cases we see no diminution of the quantity of uric acid produced by a course of baths; while in both the urine contained no "free uric acid" at the beginning of the course of baths, for 100 ccm. of the urine yielded with strong hydrochloric acid just the same quantity of uric acid after filtration through uric acid as without filtration. In these cases we see the joints which are always implicated in "gouty fingers" remain entirely free, while all the other joints of the fingers and of the wrist are involved. The third joints are in the same condition as in healthy persons; they are not enlarged, and remain completely movable, all the other joints of the fingers being either swollen or stiffened. This difference in the hand of rheumatoid arthritis and that of "gouty fingers" is a very striking one.

With respect to the treatment of the disease, I would make the following remarks. In the cases in which there is no pain the only inconvenience suffered is the disfigurement of the hands, especially in the case of ladies; but as most of the subjects of "gouty fingers" are at an advanced age, this disfigurement is not much felt. The treatment in advanced cases is quite hopeless, as the changes in the bones are beyond remedy.

In cases in which the morbid process is only commencing we must interfere on account of the pain, the imminent disfigurement, and hindrance in movement, or complete stiffness. The best remedies in such cases are repeated courses of baths, a strict diet, and the continued use of an alkaline mineral water, especially Fachingen. As I mentioned above, in the case of Fig. 3, a single course of baths at Wiesbaden was the means of freeing the patient from all pain.

The diet is described *in extenso* in the above-quoted treatises on gout, in the work of Ebstein,[10] and in my work,[11] to which a diet table for gouty patients is appended.

[10] Das Regimen bei der Gicht. Wiesbaden: Bergmann, 1885.
[11] Die Gicht und ihre erfolgreiche Behandlung. Wiesbaden: Bergmann, 1891.

OBSERVATIONS ON ADDITIONAL CASES ILLUSTRATING HEPATIC SURGERY.

BY J. KNOWSLEY THORNTON, M.C.,
PRESIDENT OF THE MEDICAL SOCIETY.

(*Concluded from p. 764.*)

CASE 9.—A single lady, aged thirty-four, whom I saw in consultation with Mr. Edgcombe Venning, to whose kind care of the case after operation I am indebted for being able to add it to the list of successes. I operated on May 21st, the day following the last case. Attacks of pain began in 1875, and were always sudden and spasmodic; sometimes one or two years would pass without an attack. The attack which led to my being called in began in the previous November, the attacks of pain and vomiting continuing at intervals till I saw her. On opening the abdomen I found everything so matted together that I at first mistook the head of the pancreas for a thickened gall-bladder. Finding my mistake, I proceeded to carefully make my way through some fresh adhesions between the stomach, the omentum, and the right lobe of the liver, and at last found the gall-bladder, deeply placed and packed with gall-stones. In searching for it I opened a small abscess under the edge of the liver, and let out about an ounce of thick pus, and cleared away some cheesy material. The clearing out of the stones was long and difficult, and required the aid of various scoops and forceps; when I had finished and washed it out I found that, as in Case 7, it was impossible either to remove it, suture it, or suture it into the abdominal opening, and I therefore merely passed a rubber tube to the bottom of the gall-bladder, and brought it out through the abdominal wound; this of course leaves the opened gall-bladder open to the general peritoneum, and I therefore made a counter opening above the pubes, and drained the pouch of Douglas also with a glass tube. The procedure of leaving the gall-bladder open seems at first sight very dangerous, but these two cases prove that with due care in the arrangement of the tube, and with the auxiliary drainage of the pelvis, it may, when necessary, be safely resorted to. In both cases the wound in the gall-bladder was slow in closing, as one would expect from its being so much wider open than when sutured into the incision; but there was no evidence of any serious leakage from the open gall-bladder into the peritoneum, though the discharge of bile-stained mucus through the rubber tube was very free from the first. I suppose that when the abdominal incision is sutured, and the abdomen well strapped up, the adherent viscera round the gall-bladder or duct, as the case may be, press up to the parietal peritoneum, and the fluid finds it easier to escape through the open tube than to spread into the peritoneum between the surfaces of these structures. Then in a very short time a firm wall all round the tube is formed by the adhesion of neighbouring surfaces. This patient also made an excellent recovery, and on recent inquiry writes that she continues "a walking advertisement" for surgery.

CASE 10.—This case was one of large hydatid cyst of the liver, which I saw in consultation with Dr. Ransford, and which had been thought to be some disease of a more serious kind. I felt perfectly certain of my diagnosis, and verified it by clearing out a large quantity of hydatids and semi-purulent fluid, then washing the sac well out with iodine and water, and draining it with two large rubber tubes. It was long in closing, and after it had closed the patient began to have recurrence of shivering and fever, and at last such distinct enlargement of the right lobe of the liver that I reopened a small spot in the cicatrix, and punctured with a long fine trocar, expecting to find recurrence of suppuration. Nothing but dark blood came, though I punctured deeply in various directions. The result of this phlebotomy was an immediate drop of the temperature; but in a very few days it rose again, and all the old symptoms—chilliness, nausea, anorexia, &c.—returned. After a time, however, the patient gradually improved, and is now, I think, going to get well without further surgery. The cause of the serious recurrence of symptoms remains a mystery, as there has certainly been no escape of pus anywhere. I think it is possible there may have been some deep effusion of serum, which caused the symptoms by setting up tension and obstructing the hepatic circulation, and that this has been gradually reabsorbed.

During the time that has passed while completing the above cases I have also performed five exploratory operations in connexion with disease of the liver—a large proportion of explorations in proportion to the number of completed cases. But this must always be so when one is dealing with a comparatively new departure in surgery, and especially in a field in which positive diagnosis is so difficult as in the one we are considering. Two of the cases turned out to be, as I feared they would, malignant disease. In the first the exact origin of the disease remained obscure after the exploration owing to the matting of parts, and the patient, an elderly gentleman in a very low state at the time, died of complete suppression of urine. I did not myself think this was a gall-stone case, but he had many of the symptoms of impacted gall-stone, including jaundice, and as there was no free fluid in the peritoneum, and no distinct evidence of malignant disease, I thought, with Dr. Broadbent, that it was a proper case for exploration.

The next case was that of a lady, who had been till shortly before I saw her (also with Dr. Broadbent) in the best of health. There was a small, hard, round, mobile body in exactly the situation of the gall-bladder, and here again there was no free fluid, and she herself was very anxious to have the diagnosis made positive by exploratory incision. I found that the hard body named above was a little malignant mass projecting from the right lobe of the liver, with more or less of a pedicle, and that there were other masses embedded in the liver, so I at once closed the incision, and she was happily none the worse for it, and lived for some months.

The next case was that of a young lady whom I saw with Mr. Cripps Lawrence, a case with a long history of pain, and of attacks like gall-stone colic, and I certainly expected to find gall-stones, but there were none, and I could find nothing very definite to account for the pain. I found, however, a small hard body, which appeared to me to be a new growth, but I could not define its exact place of origin, and I closed the incision with some fear that this might eventually turn out to be a case of malignant disease, but the long history before and her health since seem to contra-indicate it. Mr. Lawrence writes on Jan. 29th that the patient gained flesh and strength after the operation, and was free from pain for some time, but had relapses in July and October, the latter being somewhat severe and prolonged. Still she has gained on the whole in general health, and there seems no evidence of any serious organic disease. After my experience with Case 8, an unsuccessful exploration of this kind, with recurrence of symptoms, naturally made me wonder whether I could possibly have missed a small stone.

The fourth exploratory operation was performed upon another case of Mr. Venning's, a young gentleman who had knocked about the world a great deal, and had often been much exposed in travelling, hunting, and shooting expeditions. He had many of the symptoms of gall-stone, and a very distinct hard and tender swelling in the region of the gall-bladder; and after careful consideration, as he was losing health and suffering a good deal of pain and inconvenience, we decided to explore the swelling. It turned out to be a hard, almost calcareous mass, projecting from the right lobe of the liver just over the gall-bladder, and on puncture it was gritty and yielded just a trace of cheesy material on the needle. Below this and on the under surface of the liver were a number of pinkish, somewhat translucent nodules, which certainly looked very like malignant disease. I was a little inclined to regard the calcareous mass as an old hydatid; but on careful consideration of the case in the light thrown on it by the exploration, we were rather in favour of the whole thing being gummatous, and he admitted that he had had syphilis. This view proved to be correct, and he got quite well with large doses of iodide of potassium. In connexion with this case I may mention another (also a young gentlemen) in which I was asked to perform paracentesis abdominis, the idea being that he was suffering from hepatic dropsy resulting from cirrhosis. After the removal of the ascitic fluid I found a greatly enlarged nodular liver—some of the nodules hard, some soft—and I suggested that they might be gummata. The case is not concluded, but he has improved in health under the use of large doses of the iodide, and the liver has

got markedly smoother and smaller, so that I think we are on the right track.

The fifth case of exploratory incision I saw in consultation with Dr. Ord. The lady (middle aged) was a confirmed invalid and constantly attended by two nurses. She had passed some very large gall-stones, and another was believed to be present in her gall-bladder, causing much pain. I could not convince myself by examination or from the symptoms and history that it was a case of gall-stone colic, but I quite agreed with Dr. Ord that it was a proper case for exploration. I found the gall-bladder and its ducts and surroundings healthy, but some matting of parts from previous inflammation. I simply divided the adhesions and closed the incision, and the patient lost her pain and is now in good health. This case appears to be identical with that of the Irish lady, which I gave in my previous paper; both were exceedingly ill, and both were restored to health by the exploration and separation of some adhesions.

I have recently had another case with Dr. Ord and Mr. Turner, an officer, aged sixty-three, with an enormous hepatic abscess; the surface of the liver was slightly adherent to the parietes, so that I was able to open it without exposing the peritoneal cavity, and, in order to avoid all risk of the liver tearing away as the abscess emptied, I put a fine suture through the upper and lower angles of my abdominal incision, and the corresponding angles of the incision into the liver. The abscess had been explored the day before I saw him with a hypodermic syringe, so I could not be quite certain of asepsis, and therefore thoroughly washed out the cavity with a strong solution of iodine and water. Discharge was very free for the first week, then steadily diminished for the next, and by the end of the fortnight was practically serous, so that the dressings could be left for two or three days undisturbed, and now, at the end of three weeks, the cavity has practically closed, and the patient has gained extraordinarily in the short time in health and strength, a remarkably quick result in a patient of this age, and with an abscess holding several pints of pus.

I have given in more or less detail notes of sixteen cases in which I have operated, let us now consider the lessons which these cases teach. In ten I expected to find gall-stones; I found them in seven. I diagnosed another case correctly, but unfortunately failed to find the gall-stone, though it was there; and in another case the disease was in the gall-bladder and the symptoms were due to obstruction of the ducts, but it was hydatids and not gall-stones; in a tenth case I diagnosed hydatids of the liver, and the operation proved that my diagnosis was correct. In three other cases I explored, not expecting to find gall-stones; in two I found what I expected, malignant disease, but I cannot claim accurate diagnosis because I was in doubt; in the third case I did not think I should find a gall-stone, and I found merely some adhesions, the result of previous trouble during the passage of large gall-stones, but the division of these cured the patient, so that though the diagnosis was not perfect the result was good. Three cases remain. In one the diagnosis of gall-stones was not justified by the exploration, and the patient is little if any better for the operation; in another no gall-stone was found, but the exploration led to a new diagnosis, which was proved by successful medicinal treatment to be the correct one; and in the last case the diagnosis had been made for me by Dr. Ord and Mr. Turner, and verified by puncture before I operated, and the result of operation has been eminently satisfactory. I think, then, on the whole series the results are good, and amply justify the operative procedures. At the same time there is sufficient uncertainty and failure to show that it is to a more perfect diagnosis that our chief attention must be directed. I believe that as experience is gained by more frequent exploration in doubtful cases, we shall advance in certainty of diagnosis; but I think it is too much to hope that we shall ever retain certainty in all cases. With regard to gall-stones, I think the chief points to be noted are the sudden nature of the onset of pain and its equally sudden departure, the way in which it travels round the body and through into the back at the angle of the scapula, and the sense of constriction round the region of the diaphragm. The presence of a mobile pear-shaped tumour in the situation of the gall-bladder, or to one or other side of that situation, which rises and falls with respiration, variations in size and tension of this swelling may make diagnosis pretty certain. The above symptoms, being suddenly complicated by jaundice, especially if a swelling previously present disappears, make it pretty certain that the stone has passed through the cystic duct and become impacted in the common duct.

It is obvious from two of the cases I have given that the absence of ascitic fluid cannot be relied upon as a differential diagnostic sign between malignant disease and stone in either duct, and we must always remember that gall-stone may be present, and actually occasion a cause of symptoms along with malignant disease, also causing obstruction of the ducts, for most interesting notes of such a case I am indebted to my friend Dr. Barlow. My absence from town alone prevented my seeing this case in consultation with Sir Wm. Savory and himself, and I think it is very likely that the symptoms would have led me to urge operation; but the necropsy showed that, though the removal of the stone might have given some relief, the case would still have terminated fatally from malignant disease of the pancreas obstructing the common duct.

The position of the swelling when the cystic duct is obstructed varies so much in different cases that it has but little diagnostic value; and in cases in which there has been much inflammation, matting the parts above the gall-bladder, neighbouring organs, especially the kidney, are so liable to sympathise that the greatest care is necessary not to be led astray into considering the renal symptoms as the essential feature of the case. My first case in the present series illustrates this well; it also shows how a patient suffering from a serious chronic disease like chronic rheumatic arthritis may have all her symptoms relieved and her general health improved by the removal of a serious source of local irritation. Case 2 illustrates the success which may be obtained by merely needling up the stones in the common duct and leaving the fragments to find their own way into the bowel. To obtain success in needling, however, I think it is essential that the stones be not too large, and that they have some mobility in the duct. Had I needled these stones at once the patient would have been saved the serious risk of a difficult cholecystectomy, though now she is well I think she is more likely to keep so without her gall-bladder.

Case 3 also illustrates what may be done with needling even after opening of the duct when we have to deal with a large adherent stone; it also shows, what I believe was unknown before, that it is possible to operate directly upon the common duct and suture it securely even though fragments are left in it. This case and No. 6 (that of Dr. Maurice) also show that prolonged jaundice and a great state of emaciation and weakness are no bar to the most rapid and complete recovery. Prolonged jaundice has been said to interfere with success, but I have never found it make any difference.

Case 5 illustrates the difficulty of differential diagnosis between gall-stones and hydatids when the latter are confined to the gall-bladder.

Cases 6 and 7 show the advisability of at once opening the common duct when large stones are found to be impacted in it; and the intimate adhesion of the stones to the lining membrane of the duct show not only the futility, but extreme danger, of attempting to force them down by external manipulation, as proposed by Dr. Harley, and practised by him in Case 7 with marked increase of all the serious symptoms.

Case 8 shows how dangerous it is to be influenced by previous history or the opinion of others. I made a correct diagnosis, but could not divest my mind of the possibility of malignat disease; the result of this bias was two serious mistakes in my procedure: 1. I did not prolong my search for the stone sufficiently. 2. I feared a malignant fistula if I sewed the gall-bladder into the abdominal incision. Hence my patient lost her life, and I spoilt what would have otherwise been a completely successful record. I have sufficiently commented on the remarkable fact shown in Cases 7 and 9, that the gall-bladder may be left open in the peritoneum or the duct imperfectly closed if efficient drainage is provided, without any serious complication resulting, and without the escape of bile into the general cavity of the peritoneum. The counter opening above the pubes and the glass tube in the pouch of Douglas I commend as a great safeguard in all doubtful cases, and with perfect asepsis I believe that it in no way increases the risk.

The above cases, together with those already laid before

the Society, complete the record of my experience in hepatic surgery up to the end of January, 1891, and I trust they may be of value to the future of this very interesting branch of abdominal surgery.

CHOLERA AMONG THE ASSAM TEA COOLIES.

BY SURGEON-GENERAL A. C. C. DE RENZY, C.B.

IN the Sanitary Report of the province of Assam for 1878 I brought to notice some remarkable facts about cholera among the coolies who go up the Brahmaputra river by steamer to work on the tea gardens of Assam. For many years these coolies had suffered frightfully on the passage up the river. A voyage unattended with cholera was the exception rather than the rule, and it was a frequent occurrence for from 10 to 20 per cent. of a batch of coolies to die on the short trip of about fifteen days. In the years from 1871 to 1878 the death-rate on the passage calculated as for a year was 47·8 per cent. of average strength. This terrible mortality had continued for so many years, in spite of all the efforts of the Government to prevent it, that it came to be regarded as unavoidable, and to be due to some mysterious influence which was beyond human power to control. The most perfect cleanliness was maintained on board the steamer; the coolies had ample room on decks, covered by an awning, and open on all sides to the fresh air. They were well fed and well provided with clothing. When I came, as part of my official duty, to investigate this case, I was at first greatly puzzled. My previous experience had lain almost wholly in the Punjab—a province whose climate and sanitary conditions differ entirely from those of Assam. The former has one of the driest climates in the world, the latter one of the moistest; and the difference was equally great in other respects. My Punjab experience had led me to the conclusion that cholera is almost always spread through the medium of water; and that in places where the water-supply was secure against the possibility of excremental pollution, there was very little fear of an epidemic of cholera, even though detached cases of the disease might be brought in from time to time; but that no matter how perfect the sanitary arrangements might be in other respects, if the water-supply was exposed to contamination, most serious epidemics were to be apprehended. I was told that this rule would not hold good in the case of the coolie epidemics, that the coolies were supplied with perfectly pure water—the same, in fact, as was used by the European passengers and the native crews of the steamers, both of which classes had, for upwards of twenty years, enjoyed almost complete immunity from cholera. Everyone on board used water drawn from the river. I was shown the large iron tanks into which the water was pumped for the use of the coolies, the suspended matter being precipitated by the use of alum. I could not remain insensible to the force of this evidence. I began to think that, after all, there must be something in the explanation of the epidemic among the coolies, which was universally accepted, or the river. It was well known, it was said, that non-Aryan races were specially prone to suffer from cholera, and the great majority of the coolies were non-Aryans. At the same time I could not but recall the many occasions on which I had seen my own Aryan fellow-countrymen, British soldiers, decimated in a few weeks by cholera in the Punjab, and it seemed strange that on the Brahmaputra, over a period of many years, other countrymen of mine, if it were a mere matter of personal susceptibility, should have shown themselves to be so little liable to suffer from the disease while travelling on the same boats, on the same decks, with the sorely afflicted coolies.

A more rational explanation, and one more in accord with experience in all parts of the world, shortly afterwards appeared. During one of my tours of inspection I happened to be on board a steamer with a batch of coolies, among whom cholera was raging, the crew and my fellow-passengers being as usual quite unaffected, and as I lay awake one night in my berth, thinking what could possibly be the cause of the mysterious limitation of the attacks, I made up my mind to get up at daybreak and to go aft next morning among the coolies, note their ways and doings, in the hope that I might thus obtain some light. I took up my position in the stern of the vessel near where the latrine was placed, and soon afterwards the coolies began to come down from the upper deck where they slept. I observed that there was a general movement towards a tub which was placed alongside the latrine and was intended for water for ablution after defecation. The coolies dipped their drinking vessels into the water which they used to wash their mouths and faces. Presently a woman came with an infant on her hip, washed the child's clothes in the tub, other coolies came, filled their vessels with the water in which the clothes had been washed, gargled their throats and washed their faces with it, and so it went on for hours. It was at once evident that the tub was a ready means for circulating the cholera contagium, and I ascertained that the doings I have described were of daily occurrence on every steamer carrying coolies. It was true that a pure water-supply was provided for their use; but as there was only one tap in the tank which was to supply four or five hundred coolies, a person would often have to wait a considerable time before he could get supplied, and so the poor ignorant people, to avoid the delay, did not hesitate to use the foul water in the tub. Arrangements were at once made to supply abundance of pure water for ablution, as well as for drinking purposes, under conditions which made it impossible for one coolie to use water which had been in contact with another, with the effect that the epidemics which had lasted so many years suddenly ceased. Isolated cases occurred in coolies who formed part of batches which were known to be infected on their arrival at the port of embarkation; but the mortality at once fell to one-third of the previous average, and remained at a very low figure for ten years, notwithstanding that in that interval the districts from which the coolies are recruited, and the province of Bengal generally, had been visited with several severe epidemics.

Unhappily in 1888 and 1889 there was a return of the old state of things, and the mortality was truly lamentable. In 1888 there were 925 deaths among 31,217 coolies, and in 1889 there were 596 deaths among 34,507 coolies. In the two years 252 deaths occurred *en route* to Dhubri, the port of embarkation—and 391 at Dhubri itself; 282 died on board the steamers, and 596 at the depôts up the river, at which the afflicted people were landed from the steamers. Nearly all these deaths were due to cholera. It has been said that the renewal of the epidemics shows that the cessation of them was not due to the change in the system of water-supply above described. I think I can show that there is no ground for this contention. Before I left Assam I warned the Government that in order to keep the epidemics in subjection two things were necessary—(1) to provide good water at the halting places *en route* to Dhubri. So far as the official reports show this has never been done, and on leaving the railway station, forty miles from Dhubri, the coolies have to travel on foot along a road on which the water is no better than ditch water. Under such circumstances it is no wonder that the mortality from cholera *en route* to Dhubri was so great. The second measure I insisted on was that the water-supply at Dhubri itself should be put into a satisfactory state. When I left it was in a very dangerous state. There was a very badly constructed well, the ground round which was thoroughly polluted by the ablutions of the coolies, and though the coolies were forbidden to take water from the stagnant ponds close by, no amount of vigilance could prevent them from doing so. The water-supply, I believe, remains as it was, and I have no doubt it was an important factor in propagating the contagium brought in by the coolies. The coolies on their arrival at Dhubri are inspected by a medical officer, and every endeavour is made to keep back all who show any signs of illness from going on board the steamers; but it is obvious that in the case of cholera it is only when the symptoms have become somewhat pronounced that it can be recognised, and if large batches of coolies go on board in the incubation stage, no matter how perfect the sanitary arrangements may be, the disease will show itself in due time.

Some high Indian authorities believe that these great epidemics on the Brahmaputra are due to some widespread atmospheric influence which hangs over the great river, and they seem to despair of being able to bring them under control. I do not share this desponding belief, and I feel encouraged to take a more cheery view by the results of the emigration from Goalundo, a port lower down the river than Dhubri. The coolies embarking at Goalundo have to pass Dhubri, and if the calamities which befell the Dhubri coolies were due to atmospheric influence, we should expect

to find the Goalundo coolies suffering likewise. On the contrary, we find that they passed up with comparatively little loss. In 1888 there were 11 deaths, of which 7 were infants, among 2551 coolies, and in 1889 there were 3 deaths among 1763 coolies. The Goalundo and the Dhubri coolies were in all respects similarly circumstanced, except that the former had not been exposed to the unhealthy conditions existing in the camps *en route* to Dhubri and at Dhubri itself.

Assam has unrivalled advantages as a field for the employment of the poverty-stricken population of the congested districts of India. But it is idle to expect that the tide of emigration can set in that direction, so long as people have to run the gauntlet of such epidemics as form the subject of this paper, in order to reach the province. My firm belief is that at a very moderate expense the Government might remove the obstacle, with immense benefit to the people of India.

Dublin.

NOTE ON DISTRESSING AWAKENINGS.

BY A. W. MACFARLANE, M.D., F.R.C.P. ED.

SOME persons do not know what it is to rise from sleep in fresh and buoyant spirits; on the contrary, many awake tired and wearied. A few fare even worse, for they awake in the early morning in great distress, and this feeling is replaced, after a time, by weariness and depression. Between the mental conditions of slight malaise and of morning misery all grades of discomfort may be experienced; just as many shades of mental discomfort are associated with the abnormal states that range from slight degrees of neurasthenia up to the more pronounced conditions of hypochondriasis and insanity. Awaking that is not attended by feelings of invigoration and *bien-être* is abnormal; it betokens some departure from health, or it points to sleeping in unhealthy surroundings. Sleep is a conservative or constructive process. During the activity of daily life the expenditure of nervous energy is rapid, and it preponderates over repair; coincidently, waste products are deposited in the tissues in ratio to the work they effect. The katabolic exceed the anabolic processes, hence the need for sleep. During sleep these conditions are reversed, the expenditure of energy is reduced to a minimum; the waste products are removed from the economy, and, the reparative processes continuing, potential energy is stored up. When depuration and recuperation are complete, awaking ensues, and the textures being reconstituted and well innervated, the sleeper arises full of power and well-being. A vigorous man awakes full of energy, because his textures have accomplished these processes. If, however, such a man curtails his sleep unduly, or if by excessive fatigue he charges his tissues with a larger quantity of waste products than he can excrete in the ordinary hours of sleep, his bodily textures are not adequately renovated, and he awakens languid and tired. The feeble and convalescent accomplish such changes slowly and with difficulty; they are often unable to effect the necessary processes in the hours usually allotted to sleep, so they awake from their night's repose tired and jaded. They consequently feel keenly any curtailment of sleep, as well as any unusual fatigue, and this they perceive most on awaking. The personal equation plays an important part in the recuperation of sleep. Such tired awakenings are readily intelligible.

The patients to whom I wish to refer are a class of habitually bad sleepers, who awake every morning more or less wearied and worn out, but who also from time to time, after an unusually deep sleep, awake in great misery. Collectively, they present very similar symptoms, although these may be modified to some extent by temperament and mental development—in short, by the quality of the man. They awake in the early morning, usually from 4 to 5 o'clock, in much distress, covered with cold perspiration, and they lie tortured by evil forebodings for an indefinite time. The mental distress usually begins before sleep terminates; they are conscious that it awakens them, and occasionally they find themselves groaning. They do not recollect that the sensation had its origin in a terrifying dream, nor do they associate the awakening with dreaming. The acute misery is followed by depression and dread. They attribute the awakenings to sleeping "too deeply," and these bear an intimate relation to morbid sleep. Two patients who are so afflicted state that they occasionally awake not knowing who they are, or where they are, and without knowing that they have slept until they find out how many hours have passed; the mental unrest follows. They all agree that the seizures, if they may be so called, are more prostrating than lying awake all night. Such awakenings do not recur with regularity, although in one instance they did so every seventh or eighth night for a time. The patients who suffer in this way are invariably neurotic and neurasthenic; some are hypochondriacal. They present widely different symptoms during the day, but they all exhibit, in greater or less degree, a lack of mental power and endurance, and they are introspective, self-conscious, and desponding. They dread the unknown; frequently they are restless and yawn and sigh a good deal. They may be divided into two groups. The first are those who have been enervated by excesses, commendable or the reverse; the second by malnutrition, due to an altered blood-supply. One of the chief differences that I have noted between them pertains to their falling asleep. The first group become depressed towards bedtime, and positively dread going to bed. There is nothing of this in the second—indeed, before a "bad" sleep there is often a feeling of exaltation (euphoria). From this they are sometimes able to predict the occurrence of such sleep. One patient, who can do so with some certainty, is occasionally deceived, for, in spite of feeling well, too well, and comfortably sleepy, when he goes to bed he grows restless in the act of falling asleep, and, beginning to turn, sleep deserts him. There is a very intimate connexion between the causes that give rise to broken sleep and those which induce morbid sleep.

The causes of this morbid sleep are, I believe, twofold: the one depending on some peculiar condition of the nervous system, the other on toxic causes. Morbid sleep occurs in connexion with many neurotic diseases. Amongst others may be mentioned hysteria, epilepsy, migraine, and asthma. It has also been noticed in pregnancy and at the menopause. In all these instances it has been observed that such sleep was not followed by any renovation of the bodily powers, consequently it may be concluded that the tissues were unable to effect their depuration or recuperation. In like manner, those who suffer from morning misery, from neurotic causes, awake wretched instead of invigorated, and sometimes they are afflicted with headache and gastric and biliary derangements. In a lady of advanced age, who was for many years under my care, this morbid sleep was followed by an attack of migraine and a wretched awaking alternately.

Morbid sleep occurs in many toxic conditions; it is common when the blood is surcharged with bile, urea, malarial poison, and it has been noticed to precede an attack of acute gout, and to follow poisoning by the products of digestion (ptomaines?). The morning horror of chronic alcoholism and morphinism is widely recognised. In the case of gout such morbid sleep may be preceded by euphoria, just as that symptom occurs in the initial stages of puerperal and other septic fevers, the exaltation being the first symptom of the poisoning. In the second group of cases under discussion euphoria may precede, and misery follow, the morbid sleep.

The causes which combine to make such awakenings miserable are numerous. The nervous tension that exists in a healthy person during diurnal activity is lessened during sleep. In the weakly and neurasthenic the store of nervous energy is small in quantity and easily dissipated during daily duties; at night its recuperation is slow and difficult, so that the nocturnal condition is one of exhaustion. In such a "hopeful" disease as pulmonary consumption sinking and distress in the early morning are often complained of. It is about 4 o'clock that the nervous energy is at its lowest, and death frequently takes place about that hour. This lack of vigour is specially felt after morbid sleep.

There are many grades of normal sleep. During sleep the heart beats more slowly and quietly, the brain becomes comparatively anæmic, and vascular tension is diminished. These changes vary with the depth of sleep. Dr. Graves long ago wrote: "It is between three and five in the morning that the inclination to sleep is strongest; it is about this time that sentinels are most apt to slumber at their posts, and consequently attacks upon camps or cities, made with the intention of effecting a surprise, are usually undertaken about this period of the morning." Quite recently

Mönninghoff and Piesbergen pointed out that the depth of sleep increased for a second time after four hours and a half, and continued to grow more profound until the end of five or five and a half hours. The brain is at this time comparatively more bloodless. Many kinds of morbid sleep, due to toxic causes, terminate at this hour. It is during this unusually deep sleep that toxic awaking occurs. The man who has drunk or smoked too much is then awakened to repent his folly. The more pronounced anæmia that then occurs appears to cause awaking. An anæmic brain is the source of vacillation and fear. The forebodings that precede an apoplectic attack accrue from this. The neurasthenic state is equally the parent of dread, and, when these conditions are combined, depression and misery are explicable. In enervated states volition is enfeebled, and emotion is correspondingly exaggerated by day; in the early morning, with lessened nervous energy and a diminished cerebral blood-supply, these conditions must be accentuated. For, as Bain writes: "States of pleasure are concomitant with an increase, and states of pain with an abatement, of some or all of the vital energies." It has been truly said that it is in the early morning that the soul holds its inquest in the heart of man. Mosso has pointed out that in the act of awaking the brain undergoes a diminution in volume, and contains less blood than during sleep; this would appear to be coincident with the sudden dilatation of the pupils that then takes place. It is probable that this sudden increase of anæmia may, to some extent, account for the distressing sensations experienced on awaking.

Many neurasthenics grow nervous towards night, and to such an extent that they may be afraid to go to bed after reading or listening to a terrifying tale. The exhaustion inseparable from daily activity diminishes the power of their inhibitory centres. Curtailment of sleep sensibly increases this lack of control, and this is equally noticeable after morbid sleep. Awaking in this condition these centres are unable to resume their functions, and incapacity to think leads to introspection. One patient under observation affirms that occasionally he is able to direct his thoughts out of their ordinary gloomy groove, with the result that depression and dread soon disappear. The absence of sensory stimuli probably increases the distress. The darkness of the night (such awakenings are most complained of in winter) exerts a material influence. It reduces many a neurasthenic to the mental level of a child or a savage. In darkness they are haunted by fears unknown to their daily lives. Travellers in northern climes have insisted upon the depressing effects of the absence of light upon men and the lower animals. My friend Mr. Crockett of Wolverhampton, formerly chief surgeon to the great works at Cyfarthfa, assures me that miners injured in darkness suffer more from shock than those injured in the light. During the light and bustle of the day innumerable impressions are constantly streaming brainwards, and they serve to correct thought. These are almost in abeyance at night. Thought uninhibited from within and uncorrected from without is apt to run riot; moreover, it is liable to run apace, and so to become intensified from the want of distracting agencies around. It has been noted that in the insane thoughts grow far more extravagant in darkness; indeed, a form of nocturnal insanity is well recognised, characterised by restlessness and excitement, and by an extravagant mental state, symptoms which completely disappear during the day. Some of the patients under discussion have curious hallucinations whenever they shut their eyes. One that seems to be disagreeable is a loss of the sense of locality; they think their bed is placed in a different position &c. The poet who has well described most things in Nature has not left these awakenings untouched. The following lines occur in Melpomene:—

> "These pannicks whence? And why my bosom torne
> With sudden terrors never felt before?
> Darkness inwraps me round,
> While from the vast profound
> Emerging spectres, dreadful shapes assume,
> And gleaming on my sight, add horror to the gloom.
> * * * * * *
> "The fervent prayer was heard: with hideous sound
> Her ebon gates of darkness open flew;
> A dawning twilight cheers the dread profound,
> The train of terror vanishes from view.
> More mild enchantments rise;
> New scenes salute my eyes."

It only remains to add that men and women suffer from such awakenings in almost equal proportion, and that they occur chiefly in persons over forty years of age. Those of the melancholic temperament—designated by Laycock a degenerate temperament—suffer most acutely. In some instances these patients gravitate from neurasthenia into hypochondriasis, and into insanity, hence the necessity of early recognising the import of the symptom. With proper management such a sequence should be extremely rare.

Treatment.—It is beyond the scope of this brief note to consider the treatment of such cases at length, entailing, as that would do, the hygiene and therapeutics of many diverse conditions. It will suffice to indicate that it must be of a twofold description. First, that directed to the condition of the patient; and, secondly, that adapted to alleviate the morning misery. The former, which is the essential element, involves the consideration of measures calculated to accomplish restoration of nervous energy, and the excretion of waste products, in which diet and regimen exceed medication in value. The latter, being palliative, is of secondary importance. The indication is to flush the brain with blood as speedily and thoroughly as possible. This can be done by two methods: by way of the nervous and of the vascular systems. Mosso demonstrated that a ray of light falling upon the eyelid of a sleeping man caused an increased blood-supply to the brain, by stimulating activity in the nervous centres. This accords with the physiological law which decrees that the blood-supply of an organ is in ratio to its activity, and it explains to a certain extent the invigorating effects of sunshine. A bright light shortens and decreases the acuteness of the attack. Equally, warm and stimulating drinks, by increasing the frequency and force of the heart's action, afford much relief. The addition of a grain or two of caffein, and, in certain carefully selected cases, of a spoonful of brandy, is helpful. In some, full doses of valerian, ammonia, and chloric ether act quickly and well. In all urgent cases, in which the recurrences are frequent and severe, I advise a light to be kept burning all night and an attendant to sleep in the same room.

Manchester-square, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

SOUTH-WESTERN FEVER HOSPITAL.

A CASE OF PYÆMIA FOLLOWING SCARLET FEVER; SUPPURATION IN PLEURA AND ELBOW-JOINT; RECOVERY.

(Under the care of Dr. CAIGER.)

THE symptoms presented by the patient whose case is given below, the ulceration of the fauces, offensive nasal discharge, deeply stained rash, and extensive suppuration in the cervical region, show the severity of the attack of scarlet fever, and make it no matter of surprise that pyæmia supervened as a complication of the disease. Pyæmia is rare as a complication of scarlet fever, and when met with it is in this malignant type of the disease. Inflammation of the pleura is prone to become purulent, but the commoner joint complications of scarlet fever do not evince any proof of infective character or tendency to suppurate. Hilton[1] considered a disease of bone or joint remaining after scarlet fever as not uncommon, and wrote, "It will almost always turn out on inquiry that the patient with diseased bones or joints, as a sequel of scarlet fever or measles, had had a blow upon the joint, or had used excessive exercise so as to tire himself and to lower the vital endowments of the bone or articulation by over-fatigue." Recovery from this complication of pyæmia is very unusual, and, should recovery ensue, any joint which may have suppurated is as a rule more or less firmly ankylosed and its usefulness im-

[1] THE LANCET, vol. ii. 1861.

paired as the result of the destructive changes which have taken place in it. The early recognition of the gravity of the joint complication, and its prompt treatment by some such plan as that adopted by Dr. Caiger in his case, form most important elements in the prevention of disorganisation of the joint and the restoration of its full usefulness. By means of early and sufficient incisions, the use of antiseptics, and rest of the limb, with appropriate general treatment and good nursing, we are able to record successes in the treatment of suppurating joints, even when of this infective nature, which would not have been considered possible a few years ago. Our readers are acquainted with the destructive arthritis which only too frequently supervenes in pyæmia, whether acute or chronic, when the joint has not been incised early, or the treatment for some reason has failed to arrest the local condition. The risk to limb is not only much increased, but from the prolonged suppuration the patient's chances of recovery are greatly diminished. The danger is not from too early incision of a joint, when done with due precaution; it is from leaving it distended with purulent fluid until the inflammation has extended to the ligaments and other structures which enter into its formation.

F. H——, aged eight, was admitted on Dec. 26th, 1890, with severe scarlatina. The temperature instead of falling to the normal at the end of the first week remained on Dec. 31st at 101·8°. The rash was almost hæmorrhagic, the fauces much ulcerated, and there was offensive rhinorrhœa. The glands at the angle of the jaw and under the sterno-mastoid became much swollen, hard, and tender, with extensive infiltration of brawny character in the cellular tissue around. Pulse 144. Patient very restless.

Jan. 4th, 1891.—The swelling was much increased, giving rise to the appearance known as "bull neck," the temperature remaining between 102° and 103°. Chloroform was administered, and free incisions were made into both sides of the neck. The superficial portion of the swelling was hard and glistening on section, and yielded a thin ichorous discharge; pus was found deep down in the neck, and drainage-tubes were inserted.

8th.—The swelling had increased. Temperature 102·2°. Under chloroform more incisions were made on the left side. The rash remained dark and staining.

9th.—Some relief had been obtained. Temperature 100° to 101·4°.

18th.—Has remained much the same since the last note. Temperature varying from 100° to 103·4°. To-day there is more swelling on the left side. Temperature 102°. Under chloroform a fresh collection of pus was found deep down in the left side of the neck; this was opened and a tube inserted. Strength fairly maintained with careful nursing. Taking champagne and essence of beef well.

20th.—Temperature yesterday 101°; to-day 103·2°. Pain and friction heard in the left flank. The urine contains one-tenth albumen.

25th.—Temperature 105°. Vomited. Well-marked pleuro-pneumonia of left lower lobe. Pulse 160; albumen one-sixth. Neck discharging freely; swelling rather less.

31st.—The condition during the last few days has been most critical. Temperature, which has remained between 103° and 104°, fell in the night to 100·4° (sixth day of the pneumonia). Tenderness was complained of in the left elbow yesterday; to-day the joint is hot, tense, tender, and fluctuating. Chloroform administered, and a drainage-tube put through the joint, which, after the pus had been evacuated, was irrigated with 1 in 20 carbolic acid solution for some time. Strips of lint soaked in carbolic lotion were tightly applied round the joint, outside of which were placed several layers of sublimate wool impregnated with iodoform. The whole was enveloped in a firm elastic bandage, which kept up considerable pressure on the joint. The arm was lightly bandaged on to a pasteboard splint, and the dressing changed every four hours.

Feb. 1st.—No pain in the elbow. Only a heavy trace of albumen. Temperature 98·8°.

3rd.—Temperature has risen to 100°. Dulness and loss of vocal fremitus over lower two-thirds of left lung posteriorly. Heart displaced outwards. Respiration over 50. Paracentesis thoracis; three pints of sero-pus removed; relief.

6th.—Tube removed from elbow-joint. The same treatment by elastic pressure, exerted on the joint, enveloped in the antiseptic absorbent dressing, now changed night and morning, as the discharge is but slight.

9th.—Temperature has been variable. Breathing again becoming embarrassed. Right pleura again aspirated. One pint of pus removed. There is now practically no discharge from the elbow-joint, which, except for two small skin wounds, is healed. The same treatment continued.

16th.—Temperature has varied between 98° and 102°. Right pleura again filling. Under chloroform the empyema was opened, an inch and a half of the tenth rib resected, and a double drain inserted. About two pints of pus were evacuated, the cavity afterwards being syringed out with 1 in 60 carbolic acid lotion.

17th.—Has stood the operation well. Temperature 98°. Right elbow now quite sound. Splint discontinued, though elastic pressure maintained.

20th.—The empyema not draining properly. Tubes were temporarily removed, and about a pound of solid coagulated lymph evacuated by coughing. Evening temperature normal.

Since this date recovery has been rapid. The tube was finally removed from the chest wall on March 27th. On the 30th he was allowed to get up. The lung has apparently quite recovered, and the elbow-joint is as sound as its fellow, extension and flexion being in all respects complete. No adhesions seem to have formed within the joint, slight movements being allowed since Feb. 17th, when the splint was left off. This was eighteen days from the time of laying open the joint.

In connexion with this case it is interesting to refer to another, in which, though the child subsequently died, a pyæmic joint was treated by the above method with equal success.

L. D——, aged one and a half, admitted on July 2nd, 1890. Still desquamating after an attack of scarlatina five weeks previously. The right elbow-joint on admission was tense, fluctuating, and acutely tender. The joint was at once opened, the pus evacuated, and the cavity thoroughly irrigated with 1 in 20 carbolic acid, and a drainage-tube laid through the joint. On the following day the temperature was normal. On July 7th the tube was removed and elastic pressure maintained by means of a bandage firmly applied over a strip dressing of carbolic acid surrounded with alembroth wool sprinkled with iodoform. On the 15th, with the exception of two small points in the skin, the wounds were healed. In this child seven other collections of pus, mainly in the intermuscular planes, were treated in the same way by incision, evacuation, antiseptic irrigation, and elastic pressure. In no case did the pus re-collect.

ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

A CASE OF FÆCAL FISTULA; ABDOMINAL SECTION; OPENING IN BOWEL SUTURED; RECOVERY.

(Under the care of Dr. ARNISON.)

OF the various forms of hernia met with in the groin, that known as "lateral enterocele," "Littré's" or "Richter's hernia" is the most fatal, on account of the frequent absence of symptoms on which reliance is placed in the diagnosis of strangulated intestine. Of the cases, fifty-three in number, collected by Mr. Treves, about one-third presented the symptoms of ordinary strangulated hernia. Three of those remaining had persistent diarrhœa during the progress of the case; in others flatus and fæces were passed for from one to three days after the commencement of the strangulation. The vomiting was generally less frequent and severe than usual, whilst in only six did it become feculent. In very few was there distension of the abdomen, and in several the bowels acted after aperients. The operation of closing the opening in the bowel (usually the ileum in these cases) was less formidable than when undertaken for fæcal fistula, usually resulting from gangrene of strangulated intestine. From the nature of the protrusion it was not necessary to resect the gut before the sutures were inserted; the operation therefore took a shorter time to perform, and the subsequent risk of leakage was much lessened. For the notes of the case we are indebted to Dr. Thomas Beattie, acting house surgeon.

S. B——, female, aged fifty, a charwoman, was admitted into the above institution on Sept. 15th, 1890, complaining of pain in the lower part of her abdomen and also of two discharging sinuses in the right groin. Four years and a half ago, when lifting a heavy weight, the patient was

seized with pain in the lower part of the right side of the abdomen, and a "lump" the size of a walnut suddenly appeared in her right groin. This swelling remained, becoming larger after doing heavy work, and diminishing in size on resting, but was sometimes very painful. She at this time had no vomiting or constipation, and never wore any truss or other appliance. About three months before admission "inflammation" set in about the swelling, accompanied by great pain and redness. The pain extended across the lower part of the abdomen; her abdomen was swollen. She had complete constipation, but had never any vomiting. It was at this time that she first saw a medical man. Three weeks after the onset of this "inflammation," an abscess pointed over the swelling; the abscess burst, and a large quantity of dark-reddish, ill smelling material was discharged. Her bowels were not moved until about ten days after the abscess burst. Two weeks before admission some dark, pulpy, bruised-plum-like substance came away, since which occurrence the discharge has considerably diminished. When admitted there was a sinus over the right external abdominal ring; and lower down towards the right labium, in the fold of the groin, on the same side, there was another sinus. These were found to communicate with one another, and a probe could be passed through the lower opening, apparently into the abdominal cavity. The tissues between these sinuses were red and indurated, and there was some pain on handling; pain was experienced also on pressure above Poupart's ligament on the right side. There was a small amount of brownish-coloured discharge from the sinuses, but it had no marked fæcal odour; the bowels were regularly moved per anum.

Oct. 6th.—A director was passed from the orifice of one sinus to that of the other, and the intervening tissues slit up. Fæcal matter passed freely from the wound soon after the incision.

Nov. 24th.—The motions as passed through the fistula are thin and by no means formed, they have a very faint fæcal odour, the continuous escape of thin fæces from the sinus has so irritated the surrounding skin that it is severely excoriated and causes considerable pain. From the appearance of the discharge the fistula was believed to communicate with an opening in the small intestine.

Dec. 2nd.—The patient was put under chloroform, and, the parts having been carefully shaved and cleaned, an incision was made through the abdominal walls from a point about 4 in. vertically above the sinus, extending through and laying open the sinus, to which a coil of small intestine, having an opening in it about 1¼ in. in length and ½ in. broad, was found to be adherent. The long diameter of the orifice was in the transverse diameter of the gut. Both the parietal peritoneum and that covering the affected coil of intestine were thickened. The adhesions between the abdominal walls and the intestine were now broken down, and the bowel immediately above the opening was clamped with a thin rubber tube, and the wound in the intestine closed by means of Lembert's sutures, thin silk being used. The bowel was returned into the abdomen, the track of the old sinus carefully scraped with a sharp spoon, and the peritoneal cavity washed out with perchloride of mercury lotion (1 in 10,000). A Keith's glass drainage-tube was then passed down into Douglas's pouch, and brought out of the upper angle of the wound; the parietal peritoneum was sutured with interrupted catgut sutures; a medium-sized indiarubber drainage-tube was put in, superficial to the peritoneum, and brought out of the lower angle of the wound; the superficial structures were united by interrupted catgut sutures, and the wound dressed antiseptically. The patient was then put to bed, with the right leg raised upon a double inclined plane. The urine was drawn off with a catheter periodically. One grain of opium was administered immediately after the operation, repeated every six hours during the first day, and from that time gradually diminished. The patient was given nothing but ice to suck for the first thirty hours, and after that time a little soda-and-milk and nutrient suppositories; the diet was slowly increased in quantity, beef-tea, fish, tea, and toast being gradually added until ordinary diet was reached. Flatus was passed per anum from the second day; the temperature continued normal, and the patient made an uninterrupted recovery.

5th.—Dressing removed. About one ounce of blood-stained fluid was drawn out of Douglas's pouch through Keith's drainage-tube, and Douglas's pouch was washed out with dilute Condy's fluid until the fluid returned perfectly clear. Both the Keith's tube and the superficial drain were removed and the wound again dressed antiseptically.

11th.—Soap-and-water enema administered, and bowels moved for the first time since operation. On the following day bowels again moved. Enemata were again given on Dec. 17th and 20th, the bowels not having been moved in the intervals between these dates.

25th.—Patient allowed to be up for an hour. Bowels twice moved without enemata. On the following day she was up for six hours, and the bowels were again moved twice. From this date up daily.

Jan. 3rd, 1891.—Patient discharged; wound quite healed; bowels regular.

Remarks.—The above history, together with the condition of the parts revealed by the operation, leaves little doubt that the case was one of Littré's hernia. And we are justified in assuming that the strangulation took place at the time when the patient was attacked with the so-called "inflammation." An unusual circumstance, however, was the absence of vomiting, and this no doubt led the medical man who saw her outside the hospital to look upon the case as one of perityphlitis, and treat it as such. The case evidently progressed naturally towards a spontaneous cure, the portion of strangulated bowel becoming gangrenous, a fæcal abscess, and eventually a fæcal fistula resulting.

TEWKESBURY HOSPITAL.

A CASE OF COMPOUND DEPRESSED FRACTURE OVER THE RIGHT PARIETAL AND FRONTAL BONES; TREPHINING; RECOVERY.

(Under the care of Mr. DEVEREUX.)

WE have not infrequently of late published notes of cases of compound comminuted fractures of the skull in which trephining was performed; and although in the present day the results with the methods of treatment employed are nearly always good, these cases generally present some points of interest. We are also somewhat apt to forget that the percentage of deaths after similar injuries is high if we take the record for a period of, say, twenty years, probably not much less than 35 per cent. in hospital practice. In this patient the period of unconsciousness was unusually prolonged for a case of this description.

William S——, aged fourteen, was admitted to the hospital on the afternoon of Jan. 12th, 1891, with the history of having been kicked on the head by a cart-horse. On admission the patient was in a condition of severe collapse and was quite unconscious. The surface of the body was cold, pulse small and very weak. Movement on both sides of the body was good, but he kept on moving the left arm and leg wildly about, and there was marked twitching on the left side. Grinding of the teeth was very marked. When not disturbed he lay curled up, with the knees and thighs flexed.

On examination a wound was found very much lacerated, and extending for about three inches and a half over the anterior and lateral part of the right parietal bone, and over the superior part of the frontal bone. On digital examination an extensive depressed fracture was felt. He was anæsthetised, and the wound thoroughly irrigated with warm perchloride of mercury lotion. On further examination it was found that the fracture was Y-shaped. Two limbs were situated on the parietal bone, and the portion of bone between them was much depressed. The third limb ran forwards over the frontal bone to within half an inch of the right superior orbital margin. From this limb, near its junction with the other two, there was a fourth fracture running vertically downwards. The outer table of the skull, above the fracture, was slightly comminuted. A large-sized trephine was applied over the meeting point of the fractures and a circle of bone removed. The depressed bone was then elevated and the comminuted portions of the outer table removed. The wound was irrigated and stitched up with silk, a medium-sized drainage-tube being passed from front to back. The wound was then dressed with iodoform, protective, and pink gauze. He had a fairly good night though somewhat restless at times, and occasional twitchings on left side. His temperature was 102·2°.

Jan. 13th.—The next morning he was still unconscious,

but had no more twitchings. Temperature 99; pulse 90. Tongue clean. Had a good night, the temperature being 99·6°.

14th.—Is partially conscious, complains of his head, and tries to get the bandage off. Pulse quiet; temperature 99·2°. Had a very good night. Temperature 99·6°.

15th.—Quite conscious this morning. The wound was dressed and a smaller drainage-tube inserted. The wound looks very well. The tube and the stitches were removed two days later. His restoration to health was uninterrupted, his temperature never rising above 99°, and the wound being completely healed by Feb. 16th, when he was allowed to get up.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Heterotopia of the Spinal Cord.—Chronic Intestinal Stricture, secondary to Strangulation in a Hernial Sac.—Columnar-celled Carcinoma of Jaw.—Thickening of the Skull in Rickets.—Tuberculosis of Tendon Sheath.—Carcinoma of Scalp.

AN ordinary meeting of this Society was held on April 7th, the President, Dr. Howship Dickinson, in the chair.

Dr. ALDREN TURNER read a paper by Dr. C. M. Campbell and himself on Heterotopia of the Grey Matter of the Spinal Cord, which occurred in a human subject. The patient, who died at the age of twenty-nine, had suffered for many years from a gradually increasing exfoliative dermatitis. Two years before his death there developed severe polyarthritis, which was followed by signs of a transverse myelitis, and the fatal event resulted from exhaustion due to repeated attacks of bronchitis and the formation of a bedsore. The microscopic examination of the spinal cord revealed evidence of a myelitis, which affected principally the segments corresponding to the tenth, eleventh, and twelfth dorsal nerve roots. Here the grey matter presented a peculiar arrangement, consisting mainly in the separation of the horns of grey substance from each other, combined with a considerable amount of atrophy. The atrophy of the left grey crescent was more marked than that of the right. The central canal and posterior median septum were absent, while the anterior median fissure was represented by a small and narrow septum, extending a short distance into the white matter. The condition of the skin presented some points of interest: more or less occlusion of the arteries by great overgrowth of the middle coat, while the prickle cells retained their nuclei to the periphery, undergoing no cornification. No abnormality of the dermal nerves was detected. The author referred to the great rarity of this condition of the spinal cord, which has been called by the Germans "heterotopie." They further point out the liability to myelitis which this faulty structural arrangement manifested.—Dr. HOWARD TOOTH showed microscopical sections with drawings of a spinal cord which had been received from Dr Woods of the Hoxton House Asylum. It was taken from the body of a man aged twenty-four, the subject of general paralysis. At the post-mortem examination a subdural hæmorrhage from the middle meningeal artery was found. There was excess of fluid both on the surface and in the ventricles of the brain. The convolutions were flattened and the brain was small. There was old fibroid phthisis of the lungs. The cord had been hardened in a 2 per cent. bichromate of potash solution. Sections were carefully stained with picro-carmine and cut in paraffin. The sections showed patches of softening, the neuroglia was increased, and many masses of what were probably micrococci were present. The grey matter showed slight alterations in shape. The ganglion cells everywhere showed great vitality. In those sections in which the inflammatory processes were least extensive, the grey matter was moved from its proper position, displaced either by altered or normal white matter. Below those parts which were most disorganised there had occurred secondary sclerosis. The posterior parts of the cord were the most affected. This was true both of the grey and white matters. The anterior and posterior nerve roots were normal. Two conditions appeared to have been confounded under the term "heterotopia"; a reduplication of parts (*Doppelbilding*), and that, like the present, probably due to extensive inflammation of the grey matter. Many, if not most, of the recorded cases had been obtained from lunatic asylums.—Dr. NEWTON PITT referred to a cord with two central canals obtained from a patient with Friedrich's disease. The cord was very small, with the characteristic sclerotic changes of that disease. There was no acute myelitis.—The PRESIDENT asked Dr. Tooth if there had been any skin affection in his case, and Dr. Tooth answered in the negative.—The specimens were then referred to a special committee.—Dr. TOOTH referred to the large number of what appeared to be micrococci in his specimens.—Dr. TURNER referred to some sections of a spinal cord of a rabbit with two canals, with an accessory anterior horn and with three anterior nerve roots, and in which there was no myelitis.—Dr. NEWTON PITT suggested that there was an interesting abnormality somewhat allied to this, in which there were apparently two central canals. He quoted a case of Friedrich's disease in which, besides atrophy, this condition obtained. He also cited a case of double central canal in a healthy rabbit.—The PRESIDENT considered the subject one which might advantageously be submitted to a special committee, and in this the authors of the paper concurred.—Dr. TOOTH referred to the presence of micrococci in the specimens.

Dr. NEWTON PITT exhibited and described a specimen of Chronic Intestinal Stricture, secondary to Strangulation in a Hernial Sac. Symptoms accrued suddenly on an effort, and pain occurred at intervals, particularly after taking food. The bowels were irregular, and blood was present in the motions. Nutrition was maintained by enemata, and some improvement took place. Later on, operation being refused, the symptoms increased in severity, death ultimately resulting from stercoral ulcer. The necropsy showed a cicatricial contraction at the point of strangulation of a femoral hernia, with hypertrophy and dilatation of the intestine above and the presence of stercoral abscess. Dr. Fagge cites a case of the same sort, and another was published in the Society's Transactions some years ago, but the cases are rare.—The PRESIDENT quoted a case of cicatricial constriction in the small bowel following strangulation.

Mr. ROBINSON described a case of Carcinoma of the Eyelid. He read a report of the Morbid Growths Committee, to the effect that the structure was that of a squamous epithelioma. The growth recurred and was removed; there was no suppuration. The structure in the secondary growth was very different from squamous carcinoma, and rather resembled a sebaceous gland.—Mr. BOWLBY referred to the former report, and thought the account of the later growth quite bore out the opinion formed upon the first one.

Mr. SHATTOCK showed two Skulls from infants, greatly thickened by the formation of very porous new bone on the outer aspect. In one there were signs of syphilis, but no history of that disease in the other. Sections made without decalcification, and stained in carmine, showed complete absence of earthy salts. The appearances were like those of osteo-malacia. The author contended that the thickening of the skull, of flat bones generally, and of the shafts of the long bones are inflammatory, as in osteitis deformans. The rarefaction of the original substance of the bone in rickets would point to the same conclusion. There was nothing in the etiology of rickets that negatived such a view. There were many instances in pathology, apart from microbial origin, in which inflammation was due to morbid alterations of the blood, such as rickets was generally considered to be. The characteristic mark of inflammatory productions in rickets was the want of proper calcification of the new osseous tissue. The second specimen of thickened skull was from an infant with congenital syphilis. That syphilis without rickets might produce widely extended osteo-plastic periostitis had been long known, but the formations, as Parrot had stated, were of normal firmness. The syphilitic disease may to a certain extent determine the seat of the disease, but the rachitic, the imperfect calcification of the new bone, and the combined conditions may be termed "syphilo-rachitis."—Mr. BOWLBY dissented from the idea of rickets being regarded as an inflammatory disease, and considered that the similarity of resulting histological appearances was insufficient to prove their identity. The thickening of the skull cap, as in the cases exhibited, he thought was exceptional. In many cases it might be that the ultimate thickening in long bones was compensatory to their want of rigidity from defective calcification.—Mr.

SHATTOCK, in reply, said that the term "hypertrophy" was altogether out of place, and the thickening present was structurally quite different from ordinary bone, and was not necessarily associated with fracture or flexure of weak bones.

Mr. E. C. STABB read a paper on Tuberculosis of a Tendon-sheath. The patient was a widow aged sixty-six. Two years ago she ran a fork into the palmar surface of the left middle finger. At its base the fork penetrated deeply, so that when the hand was held up the fork still hung from it, and had to be pulled out. There was no bleeding at the time. The finger was stiff and painful for some days, during which poultices were applied. Two months afterwards she first noticed a small lump at the site of the puncture, followed shortly by others, which coalesced with the first, forming one swelling, gradually increasing in size, and rendering the finger stiff and useless. She was treated as an out-patient for seven months before admission at St. Thomas's Hospital. The diagnosis was compound ganglion, and the swelling was punctured without any result; but after a small incision a number of semi-gelatinous melon-seed bodies were expressed on two occasions. After the second incision the wound filled up with granulation tissue, and the patient was admitted in February, 1891, for amputation, which was performed at the metacarpo-phalangeal joint. On examination of the finger after removal the bones and joints were found to be normal, but all the soft parts were replaced by a gelatinous mass, in which the tendons could not be distinguished. There was one small cavity filled with caseous material. On microscopic examination of the tissue it proved to be tubercular in nature. There was no family history of phthisis. The patient had always been a strong and healthy woman, and there were no signs of disease in her lungs or other organs. No enlarged glands in the axilla. The clear history of a punctured wound, followed by swelling at the seat of puncture, and the absence, so far as could be ascertained, of tubercular disease in any other part of the body, would suggest the case to be one of inoculation.—Mr. ROGER WILLIAMS mentioned a case in an elderly man which had a very similar history. The joint ultimately developed a typical white swelling.—Mr. BARKER said these cases showed, what was already recognised abroad, that diseases of synovial membranes very much resembled those of joints, though the treatment was not always correspondingly careful. He mentioned a case of local tuberculosis of the same kind in which the patient subsequently died of phthisis.—Mr. ROBINSON thought the primary inoculation was the most important feature in the case, as there was nothing to show whence the tubercular virus was derived.—Mr. SHATTOCK referred to cases of local inoculation of tubercle, but thought that in most cases the skin was affected.

Mr. STEPHEN PAGET showed and described a case of Carcinoma of the Scalp, which had existed for four years in an elderly man. The glands were not affected, but in structure and appearance the growth differed in important respects from that of rodent ulcer.—Mr. ROBINSON said the specimen macroscopically resembled the primary tumour he had just described. He considered the further history would determine whether or not the growth was malignant.

The following card specimens were shown:—

Dr. HALE WHITE: Hodgkin's Disease with Waxy Kidney.

Dr. NEWTON PITT: Pigmented Colon from a case of Lead-poisoning.

MEDICAL SOCIETY OF LONDON.

Case of Fibro-sarcoma, or Desmoid Growth of the Abdominal Wall.—Strangulated Hernia in Infants.—Chronic Atrophic Rhinitis.

AN ordinary meeting of this Society was held on April 6th, the President, Dr. Douglas Powell, in the chair.

Mr. ALBAN DORAN exhibited a Tumour of a kind to which Professor Sänger applied the old term "desmoid." He had removed it from a stout woman, aged twenty-one, who had suffered from its growth for two years in the left groin. Posteriorly the growth was incorporated with the internal oblique muscle and the transversalis fascia, the peritoneum being free. Anteriorly it was covered by the aponeurosis of the external oblique. The tumour probably arose from the conjoined tendon. After its removal the wound was closed by deep sutures and drained; it healed rapidly. Six months afterwards the cicatrix was healthy and not stretched, the patient being four months pregnant. The structure of the tumour was in parts indistinguishable from sarcoma, being made up of young, rather loose fibrous tissue, whilst in others it more resembled a dense fibroma. Recorded cases show that "desmoid" tumours of the abdominal wall are clinically innocent, and occur far more frequently in females than in males. There is reason to believe that in several alleged cases in male patients the tumour was not of the class in question, but was true sarcoma. Any of the layers of the abdominal wall, except the peritoneum, might afford origin to a desmoid tumour. Those, however, which had been described as arising in muscular tissue were possibly sarcomata developed in hæmatomata. When the tumour was large and adherent to the peritoneum, the involved portion of serous membrane must be taken away with the growth. The more superficial layers of the abdominal wall formed a good covering to the great aperture made in the course of the operation, and experience showed that the intestines did not adhere to the walls over the area whence the peritoneum had been stripped.—Mr. SUTTON expressed astonishment that such an advanced pathologist as Mr. Doran should use such an antiquated term as "desmoid." In his opinion the tumour in question was probably a fibro-myoma springing from the round ligament. Such growths occurred in the broad ligament, and sometimes sprang from the urachus or ligament of the ovary. When similar tumours were met with in men he thought these were spindle-celled sarcoma.—Sir HUGH BEEVOR asked if Mr. Doran did not think the tumour might be pure fibrous tissue. Under the microscope the appearance was that of a purely cellular structure.—Dr. CULLINGWORTH thought the clinical history was of the utmost importance in establishing diagnosis.—Mr. HASLAM mentioned a case in which a tumour had been removed in a similar situation. There had been no recurrence since, but the case only occurred a few months ago.—Mr. DORAN, in reply, defended the term "desmoid," saying that it was now specifically applied to growths of this kind. The origin of the growth from the transversalis fascia was very distinct, and extended well into the conjoined tendon, and not towards the external ring. The patient was operated on last July.

Mr. STEPHEN PAGET read a paper on three cases of Strangulated Hernia in Infants, which will appear in full in our next issue.—Mr. ALBAN DORAN thought that in interference with the vermiform appendix peritonitis resulted rather from sloughing after damage to the artery than, as was often concluded, from sepsis.—Mr. BALLANCE said it was formerly thought that cæcal hernia had no sac. More recently it had been shown by Mr. Treves that there often was a sac, but instances had occurred in which such a covering was certainly absent. Hernia in children could often be reduced by the aid of a hot bath and inversion of the body with taxis.—In reply, Mr. PAGET said the cases he had reported supported Mr. Treves' view. In two of the cases a hot bath had been given without effect.

Dr. DE HAVILLAND HALL read a paper on Chronic Atrophic Rhinitis. He suggested that the term "ozæna," commonly used as a synonym for this disease, should be discarded. Age and sex are important etiological factors, the majority of cases commencing before the sixteenth year, and females being more frequently attacked than males, in the proportion of seven to two. Dr. Hall was of opinion that the disease is met with more especially in phthisical and anæmic patients. Though there is no distinct anatomical evidence, the majority of observers consider that the disease is preceded by a hypertrophic stage. By some authorities a congenital deficiency in, or an arrest in the development of, the turbinated bones had been regarded as the cause of the disease, the enlarged nasal passages allowing mucus to be retained and to undergo decomposition. As regards the action of micro-organisms there was a great difference of opinion. Loewenburg had discovered a micrococcus in the mucous membrane which he considered to be the cause of the disease. Whether this was the case or not, there was no doubt that bacteria played an important part in the production of the fetid odour. After giving a description of the symptoms and diagnosis of atrophic rhinitis, Dr. Hall stated that though a complete cure was not to be expected, the disease could be deprived of its worst features by carrying out the following treatment. The

nose was to be thoroughly sprayed out with a warm alkaline solution. (Mackenzie's formula, sodii bicarb., sodii chlor., boracis, of each seven grains, and white sugar fifteen grains, dissolved in two ounces of warm water, was an excellent one.) Any adherent crusts were to be removed by the nasal forceps or by the use of the anterior or posterior nasal syringe with the same solution. The patient was to be instructed to use the spray at least night and morning. If improvement followed, the simple saline spray might be continued. If not, the addition of Listerine to the fluid might be tried, or weak solutions (from two to five grains to the ounce) of alum, sulphate of zinc, nitrate of silver, &c., might be used as a spray after previous cleansing of the passages. Carbolic acid, as in Dobell's solution, would generally remove the smell. Insufflations of iodoform, iodol, boric acid, and aristol were all useful in some cases. Dr. Hall had obtained good results from anointing the interior of the nose with vaseline containing oil of eucalyptus, in the proportion of a drachm to the ounce, or the nostrils could be sprayed out with a liquid paraffin—e.g., paraleine. In intractable cases Gottstein's tampon should be employed.—Mr. SPENCER WATSON agreed in recognising the presence of a hereditary taint, probably tubercular, and thought there was some resemblance between the disease and erythematous lupus. He mentioned a case which had been cured after acute gonorrhœal infection.

OBSTETRICAL SOCIETY OF LONDON.

AN ordinary meeting was held on April 1st, J. Watt Black, M.D., President, in the chair.

Extra-uterine Pregnancy at full term; Removal of Child and Placenta by Abdominal Section; Recovery.—Dr. JOHN W. TAYLOR, Birmingham, introduced this case by reference to somewhat similar records published in the Transactions of the Society, and pointed out the distinctive features which separate the present from previously reported cases. The previous history of the case was detailed, as written by Dr. Lycett of Wolverhampton. An account was given of the operation of abdominal section for removal of the child; of the interval between this and the second operation; of the operation for removal of the placenta on the twelfth day; and of the subsequent history of the case until the recovery and discharge of the patient. The author concluded with a short commentary on the case, to which was added Dr. Lycett's description of the child.

Extra-uterine Gestation, the Sac being situated in the Right Broad Ligament; Pregnancy advanced to the early part of the fourth month.—Dr. WALTER GRIFFITH read a paper on this subject. The patient, who was under the care of Mr. Rout of Hornsey, was aged thirty-two. She had been married eleven years; never pregnant before; previous health good. Severe illness began in the second month, and was followed by severe attacks of abdominal pain and faintness. Dr. Griffith with Mr. Rout made out the diagnosis of extra-uterine gestation in the right broad ligament. The abdomen was opened, and the sac, which had ruptured, was opened and emptied, profuse hæmorrhage taking place immediately from the placental site. The breathing was arrested with difficulty. It was impossible to remove the sac, and after the abdomen had been imperfectly irrigated it was closed, and the sac left plugged. Death occurred an hour after. The specimen removed was described in detail. Reference was made to the anatomy of the placental site, the peculiar position of the right ovary beneath the sac, and to existing disease of the left oviduct; also to analogous cases of ovarian cysts invading the broad ligaments and to the cases of Werth and Hart.

Obstructed Labour, in which a Large Fibroma of the Ovary occupying the Pelvis was mistaken for the Head of an Extra-uterine Fœtus.—Dr. WALTER GRIFFITH also read a paper on this case. The patient was admitted into the Great Northern Hospital in labour, the tumour having been recognised and diagnosed as the head of an extra-uterine fœtus. Three methods of delivery were discussed: (1) Cæsarean section; (2) vaginal section; (3) craniotomy. Craniotomy was finally chosen, as it appeared to involve least risk to the mother. Great difficulty was met with in extracting after craniotomy until version was performed. Septic symptoms gradually supervened, and the patient died on the eighth day. The characters of the uterus and placental site were described, and the author stated his opinion that in all such cases of great obstruction abdominal section provided the safest course of treatment.

Extra-uterine Gestation, associated with Sloughing of the Abdominal Wall, and attempted Extrusion of a Matured and Putrid Fœtus near the Umbilicus.—Mr. MARMADUKE SHEILD read a paper on this subject. The patient was a young married woman, a primipara. For several weeks she had been ill with fever, and for several months had had a large abdominal tumour. The uterus was explored and found to be empty. She was seen by Dr. Martin. There was a considerable circular opening, with sloughy margins, in the situation of the umbilicus. Through this protruded a tumour the size of a turnip. It was black, offensive, and pultaceous. Under chloroform the opening was enlarged downwards and a fœtus extracted, along with foul fluid and gas, followed by bright blood. The placenta was attached deeply behind and above, and the sac appeared to be extra-peritoneal. The bleeding was stopped by hot-water irrigation. The placenta was removed piecemeal, further hæmorrhage being prevented by irrigation, followed by packing with sponges. The author discussed the pathology and anatomy of the case, together with the diagnosis and treatment of ectopic gestation.

Dr. CHAMPNEYS asked Mr. Taylor as to the results of auscultation of the placenta. His own case has been wrongly criticised without proper account being taken of the long interval of practically normal temperature, which entirely negatived the idea of absorption through the wound. The absorption was through the placenta. He thought that the cases of Mr. Taylor and Mr. Jessop and his own case might have been tubal or tubo-ovarian. He also called attention to the great inferiority of these fœtuses, and said the mother's life ought not to be endangered in any way for their sake. — Mr. ALBAN DORAN doubted whether the operation of craniotomy had done much more harm in Dr. Griffith's case. He had seen the case with Dr. Griffith, and had advised him to do a craniotomy. He related a case of extra-uterine gestation mistaken for an ovarian cyst.—Dr. HERMAN thought the cases in which the fœtus lay in the peritoneal cavity were explained by tearing of the amnion from the movements of the child. Probably if the vernix caseosa were examined, bits of amnion would be found in it.—Dr. GRIFFITH, in reply, thought abdominal section preferable to craniotomy in cases like the one narrated.—Dr. JOHN W. TAYLOR also replied.

The following specimens were shown:—

Mr. TARGETT: Section of Vertebræ and Sacrum, from a case of spondylolisthesis.

Mr. ALBAN DORAN: The Uterine Appendages in a case of Double Hæmato-salpinx.

Dr. WHEATON (for Dr. W. DUNCAN): Early Malignant Disease of the Uterus.

CAMBRIDGE MEDICAL SOCIETY.

A MEETING of this Society was held on March 6th, Mr. Hyde Hills, Vice-President, in the chair.

Ophthalmoplegia Externa.—Mr. WHERRY showed a patient, a farmer, aged fifty-two, from Willingham, sent by Dr. Cox on Feb. 27th. He then had diplopia and could not steer himself in walking with the right eye, which he always kept lightly closed. The right eye was nearly stationary in middle position, and there was only very slight movement visible in the ocular muscles, including the superior oblique. There was no ptosis whatever. The movements of the left eye were perfect. In associated movements the right eye seemed rather more free than when acting alone. The pupils were equal, 3 mm., active to light and accommodation. The vision of the right eye was $\frac{2}{60}$, but very slight movement of the head put the board out of view; no improvement with sph. glasses. Vision of left eye was normal. No signs of tabes, no optic neuritis. A week before he had to sit up all night with his cow, and the disorder had come on gradually next day. There had been no illness during twenty years past, until one year ago he had a bad attack of retching, thought to be influenza. He drinks a great deal of beer. There was no history of syphilis; of two children, one aged sixteen in good health, the son, aged twelve years, subject to nocturnal fits, in which he bites his tongue. Iodide of potassium was given. A week later, when examined, the movements, very limited in the right, were more easily

seen; also the eye, when examined alone, made better movements than when associated with the other eye. Mr. Wherry gave a brief account of the present knowledge of the subject of ophthalmoplegia, which should be distinguished from the unsymmetrical, complete paralysis of an ocular nerve. Since Mr. Hutchinson's paper in 1879 there had been many papers and reports of cases; those especially were mentioned in which post-mortem evidence had been recorded. There was often an association with tabes and optic nerve atrophy. Ophthalmoplegia was due to a variety of causes: degeneration of the nuclei, gummata, tubercle, hæmorrhage, fluid pressure, &c. A most important set of cases, dependent upon thrombosis in the cavernous sinus, could be found in the Ophthalmological Society's Transactions. Mr. Wherry was watching with much interest a symmetrical but not simultaneous ophthalmoplegia in a boy who had uniocular proptosis and intra-cranial bruit after fracture of the base of the skull; the ophthalmoplegia appeared more marked after ligation of the carotid. In Dr. Bristowe's remarkable cases, published in 1885 in *Brain*, the disorder seemed to be functional. The many nuclei of the third nerve were alluded to in explanation of some of the signs. In the case shown the disorder was only in one eye, there was no ptosis, and no paralysis of the sphincter pupillæ, probably none of the ciliary muscle. The lesion was either among the nuclei of origin of the nerve or near the sphenoidal fissure. Mr. Wherry thought the nuclei were invaded rather than fibres of nerve selected so partially. So many cases were of syphilitic origin; these were often symmetrical, partial in immobility with ptosis. Iodide of potassium was best given in large doses. Mr. Hutchinson reports the extraordinary dose of an ounce and a half daily. Mr. Wherry has now a patient taking 120 grains with success. Tubercular cases seem to have been helped by iodide doses and iodoform inunction to the scalp.

Paralysis of Right Sixth and Left Facial Nerves.—Mr. WHERRY also showed a labourer aged forty-five, also from Willingham, seen on February 15th at Addenbrooke's Hospital. He has complete paralysis of the external rectus in the right eye and facial palsy complete, including the orbicularis on the left side, doubtful as to chorda tympani in tongue. There has been considerable hemicrania. The symptoms date back about a fortnight as to the face, but diplopia was noticed several weeks previously. He observed his face go wrong in having to change his pipe to the other side of his mouth. There are no signs of tabes dorsalis, nor optic neuritis, and no other signs of disease or loss of function, except the contraction of the visual fields; colour sense good. He smokes tobacco and drinks a deal of beer. In contrast with the case of ophthalmoplegia, this is a paralysis unsymmetrical and complete. Both the sixth and facial nerves are often affected in so-called rheumatic disorder, and certainly in the face the orbicularis being so much affected suggests Bell's palsy, and that the occurrence of the two together is a coincidence and curiosity. Against this view is the condition of his visual fields, and the fact that the diplopia was noticed so long before the face disorder.

Symmetrical Hyperostosis of Femora (Specimens shown).—Mr. DOUTY showed the femora of a skeleton which were both enormously enlarged in circumference. He found them in a small museum in Scotland, exhibited as "giant's bones." The enlargement was confined to the shaft, and the ends were hardly affected at all. There was no twisting, and the thickening was greatest in the lateral diameter, so that the bones had an appearance of flattening. The bones were heavy and very hard, and the medullary cavity was not encroached upon. There was no history of the bones. The question was whether this sclerosed and hypertrophied condition was to be regarded as the result of a chronic periostitis, perhaps syphilitic, or whether these bones were parts of a skeleton generally affected with osteitis deformans. The absence of the twisting, and the fact that the medullary cavity was not encroached upon, were in favour, Professor Sir G. M. Humphry thought, of the former. The specimens were presented to the Pathological Museum.

Mediastinal Sarcoma in a Child.—Mr. F. W. BURTON contributed a case of mediastinal sarcoma in a child aged five years. He said that, although sarcoma of the abdomen was comparatively common in children, it was very rarely met with in the chests of young people. The child had been ill only about a month with wasting, dyspnœa, and pain in the left side. On admission into Addenbrooke's Hospital, under Dr. MacAlister, it presented all the signs of effusion into the left pleural cavity, but in addition to these it was noted that there were induration and protrusion of the tissues between the left costal cartilages, and that the heart's impulse was impalpable; temperature subnormal. Aspiration in the axilla withdrew twenty-nine ounces of straw-coloured serum. This did not appreciably relieve the dyspnœa, which six days after admission suddenly became urgent and of laryngeal type. Tracheotomy was hurriedly performed, without relief, and the child bled freely from some minute veins; this was the only indication of vascular obstruction, excepting the pleural effusion, though post mortem the whole anterior mediastinum was found occupied by a mass which completely enveloped the pericardium and compressed the aorta and large veins.

Sections of Female Pelvis.—Dr. GRIFFITHS exhibited several specimens of sections of the female pelvis showing the relation of the parts in prolapse of the uterus and other pelvic disorders.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY

A MEETING of this Society was held on March 12th, Mr. W. Dale James, M.R.C.S., President, in the chair.

Molluscum Contagiosum.—Mr. SNELL showed a child, aged two years, with well-marked mollusca. Large nodules were situated on the left upper eyelid, and smaller ones on the forehead and cheek. The duration was twelve months.—Mr. Snell also introduced a patient, a youth aged twenty-one, who in October last had been the subject of nystagmus.

Eye Injury from a Revolver Bullet.—Mr. H. T. WIGHTMAN showed, for Mr. G. H. SHAW, an Eye which had been removed in consequence of an injury received from a revolver bullet. The bullet entered under the left malar bone, and was found lying beneath the upper eyelid of the right eye, the left orbit having sustained no damage.

Closure of Cavity after Resection of Ribs.—Mr. R. J. PYE SMITH showed a boy in whom a large cavity, resulting from old-standing empyema, had closed after the resection of portions of the fifth, sixth, and seventh ribs.—Mr. Pye Smith also showed a young man, from whose right frontal sinus he had removed a number of small mucous polypi. Fragments of the polypi removed were shown.

Addison's Keloid.—Dr. BURGESS showed a man aged thirty-five, with a scar-like patch, 3 by 1½ in., of circumscribed "scleroderma" on the back of the neck. When first noticed, sixteen months before, it was a white spot about the size of a sixpence. Itching and burning had been complained of. The induration was then subsiding.

Unilateral Nystagmus.—Dr. BURGESS also showed a case of unilateral nystagmus in a man who had recovered from an anomalous attack of hemiplegia.

Sarcomata.—Dr. GWYNNE showed a girl aged twelve years, from whom he had removed half the lower jaw on the left side for a large sarcomatous growth, which had been noticed six months previously and was growing rapidly. On the fourth day after the operation the stitches were removed and the wound had practically healed. The tumour after removal measured 3½ in. in length and 7 in. in circumference. It had apparently grown from the medullary cavity and pressed out the bone on all sides. The microscope revealed a large number of round cells with some connective tissue, and here and there groups of large giant cells. The tumour was most probably a myeloid sarcoma. Microscopic sections were shown.—Mr. C. ATKIN read short notes of some cases of sarcoma, and pleaded for earlier exploratory incisions in doubtful swellings. Operation, before the state of "fungus hæmatodes" had been arrived at, was strongly advocated, as recurrence was all but certain under such conditions. In one case the growth seemed to spring from the cutaneo-phalangeal ligament of Cleland, which passes from the last phalanx of the finger to the skin. In another case an apparently innocent sebaceous tumour had taken on sarcomatous development. This was removed from the axilla ten months ago, and there had been no recurrence, though the infiltration was of the round-celled character. In a third case a mixed sarcoma had grown from the front of the shin of a young married woman. In all three cases there was a family history of "cancer," but, from all accounts, more of the "epithelioid" type,

suggesting a connexion, if not an evolution, amongst growths of a malignant nature.

Microscopic sections of the growths were shown.

A meeting of this Society was held on March 26th, Mr. W. Dale James, President, in the chair.

Optic Nerve Atrophy after Injury to the Head and Spine.—Mr. SNELL introduced a young man who, about Christmas, had been pressed down in the shaft of a coal-pit by a descending cage. There were some symptoms pointing to fracture of the skull. Sight was lost immediately. There was now optic nerve atrophy.

Malignant Disease of the Bladder and Kidney.—Mr. W. F. FAVELL showed the bladder, kidneys, and ureters from a man aged thirty-eight, whom he had seen in consultation with Mr. Thorne. The patient had persistent hæmaturia, for which he consulted a specialist, who ordered injections, which were followed by acute cystitis. He suffered acute pain, and catheterisation was necessary on account of the obstruction caused by clots and mucus in the urethra. He died of exhaustion, and post-mortem examination revealed cancerous infiltration of the coats of the bladder, with a growth in the right kidney and dilated ureters and pelves. No calculus was found, and there was no growth elsewhere.—Dr. PORTER showed for Mr. H. Boynton Lee a Horseshoe Kidney, discovered in a subject in the dissecting-room.

Changes in Tubercle Bacilli after Injection with Tuberculin.—Dr. F. J. GREEN exhibited microscopic specimens of sputa containing tubercle bacilli from a patient undergoing the Koch treatment.

Carcinoma Uteri, with Secondary Growth in the Walls of the Heart.—Dr. H. RHODES showed some specimens from a woman aged thirty-four, who had been under Dr. Dyson's care, at the infirmary, for circinoma uteri. She was admitted on Dec. 2nd, 1890, complaining of lumbar pain, menorrhagia of one year's duration, offensive vaginal discharge, difficulty in micturition, and obstinate constipation. On vaginal examination the os was found ulcerated, the vaginal walls indurated and infiltrated. The heart, lungs, and urine were apparently normal. Emaciation was very rapid, and in a few weeks a hard nodule was discovered in the right hypochondrium, which increased in size rapidly. The patient died on March 13th, 1891. At the necropsy the pelvic viscera were found matted together and infiltrated with cancer. The rectum was adherent to the uterus and considerably obstructed. The cervix uteri had entirely disappeared, and the uterine cavity was opened into posteriorly. Both ovaries were greatly enlarged and cancerous. The liver weighed 48 oz. In front of the right lobe was a large spherical nodule nearly three inches in diameter. It was adherent below to the transverse colon. In the posterior part of the right lobe was a much larger nodule, adherent above to the diaphragm. The heart weighed only 4½ oz. In the anterior wall of the right ventricle was a cancerous nodule about the size of a walnut, and coming to the surface inside the cavity of the ventricle. The valves were normal. The kidneys were small and pale; pelvis much dilated at the expense of the papillary layer, which was atrophied; ureters much dilated and distended with urine. The left suprarenal capsule was enlarged, but not cancerous. Mr. A. Jackson, Dr. Keeling, Dr. Dyson, and Mr. W. F. Favell took part in the discussion.

A few Surgical Experiences and Warnings.—Mr. W. F. FAVELL read a paper on this subject. Mr. James, Dr. Hunt, Dr. Dyson, Mr. C. Atkins, Dr. S. Matthews, Mr. Jackson, and Dr. G. Thomson took part in the discussion.

ULSTER MEDICAL SOCIETY.

A MEETING of the Ulster Medical Society was held on April 3rd, Dr. Dempsey, President, in the chair.

Fracture of the Patella.—Dr. O'NEIL read notes of the methods employed in treatment of eight cases of fracture of the patella, and showed several of the patients.—Specimens: Dr. O'Neill showed a Larynx and Trachea from a patient who suffered for five years from syphilitic ulceration of the larynx and cricoid cartilage in whom tracheotomy had been performed. He also showed the bladder of a patient who suffered from enlargement of the prostate for eight years.

Puerperal Fever.—Dr. BYERS read a paper on puerperal fever, in which, after pointing out the great importance of the subject from its high mortality, the calamity it brought on the public, and the serious loss and annoyance it occasioned the medical attendant, he discussed the question under three heads: 1. Its nature. Evidence was given in support of the view that scarlatina, when conveyed to a lying-in woman, bred true, causing the same disease, and not puerperal fever, the so-called puerperal scarlatina being probably septicæmia with a red rash. It was also considered that the ordinary form of cutaneous erysipelas (a disease analogous to the zymotics) had not any relation to puerperal fever, but it was his belief that the phlegmonous variety, being itself a form of septicæmia, might give rise to the disease. Puerperal fever, he thought, had no analogy with epidemics, and neither soil, season, nor situation had anything to do directly in its causation. Dr. Byers regarded it as a traumatic or wound fever, due to the entrance of micro-organisms from without, and in its manifestations it might take the form of a sapræmia, a septicæmia, or a pyæmia. The nature of the bacteria was discussed, and it was shown that modern research was against the "auto-genetic" or self-infective theory, the poison coming from without. The various circumstances which lead up to our present conception of puerperal fever, and the lessons which the brilliant results obtained by antiseptic precautions in lying-in hospitals taught, were stated. 2. The methods for the prevention of the disease were given, as well as rules for the guidance of the accoucheur and nurse. The routine use of douches was not considered necessary in private practice, except under certain circumstances, which were stated, and the desirability of making few vaginal examinations was emphasised, the importance of abdominal palpation during labour, as rendering vaginal examinations less frequent, being pointed out. Several objections which had been made to the use of antiseptics in private practice were then considered, and it was shown how easily the method might be carried out with very little trouble or expense. 3. Treatment: Local treatment was insisted on as being of the greatest importance, especially when done early. The value of disinfecting the genital tract, the use of iodoform crayons, the practice of curetting, and the question of abdominal section in puerperal peritonitis were discussed. General treatment was considered; and, finally, the question "How soon after exposure to sepsis may the accoucheur safely resume practice?" was raised and considered. Professor Dill having spoken, it was decided to adjourn the discussion of the paper until May.

Reviews and Notices of Books.

The Micro-organisms of the Human Mouth. By WILLOUGHBY D. MILLER, D.D.S., M.D. Philadelphia: The S. S. White Dental Manufacturing Company.

AT first sight it might appear that a work of over 350 pages devoted entirely to the micro-organisms of the human mouth could only find its analogy in the use of a Nasmyth hammer to crack a nut. Anyone, however, who takes up Professor Miller's book and gives it the attention it deserves will soon be convinced that the author has none too soon taken upon himself the task of collecting and systematising not only the observations contained in his own numerous papers, but also the many important observations on the subject that are scattered through a very bulky mass of periodical literature. The work is intended to include not only such matter as will be useful to well-educated practical dental surgeons, but much that must necessarily be of interest to those who have a love of the science of their profession. In so far as it is the product of a man who evidently combines both the practical and scientific qualifications for the holding of the important post of professor of dental surgery in a leading University, the work may be said to fulfil all that the author claims for it.

The dental and oral pathology of to-day, through the intervention of the bacteriologist, is a very different thing

from what it was twenty years ago, and it is now recognised that the micro-organisms in the mouth are constantly exerting most important actions upon both the local and general health of many patients. It is, therefore, necessary that not only should the dental surgeon understand the conditions and results associated with the bacteria that may find a field for their energies in the mouth, but the practitioner of general medicine should also make himself acquainted with the effects determined by those organisms that may make their way into the mouth from outside when the patient is apparently under comparatively normal conditions. As the author says, "not alone are they [bacteria] responsible for the vast majority of those diseases of the teeth and contiguous parts which the dental surgeon is called upon to treat, but they also give rise to other local and general disorders of the most serious nature. These various disturbances are produced partly by the direct action of micro-organisms and their products upon the teeth and the mucous membrane of the mouth, partly by constant swallowing of large masses of bacteria, partly by carrying them into the lungs (particularly in cases of violent inspiration), and, finally, by their obtaining an entrance into the blood or lymph vessels" in various ways.

It is almost impossible to give an idea of the extent of the ground covered in this work, but we may indicate as briefly as possible the lines on which Professor Miller has worked in the completion of his object. After dealing in the introductory chapter with the morphology of bacteria, the conditions under which they grow or by which they are influenced, and the products to which they give rise, he discusses the nature of the substances contained in the oral cavity that may serve as media for the nutriton of bacteria, describing the saliva and the tissues of the mucous membrane and the teeth, exudations from the gums, and accumulations of particles of food. He then gives the ordinary methods of bacteriological investigation, takes up the bacteria that are specially associated with the mouth and teeth, considers the relation of these to diseased pulps and to the formation of tartar. He shows how some of them set up different forms of fermentation, how they disturb the nutrition, set up inflammation, and how they thus cause caries of the teeth. This subject of caries and dental decay is treated very exhaustively, and the author certainly gives a more connected, complete, and rational account than has as yet been published.

The second part of the book is devoted to a description of the toxic substances that are found in buccal secretions, and the relation of these to pathogenic bacteria of the mouth, a long description of these bacteria being given; and lastly comes a chapter on the Entrance Portals of the Pathogenic Mouth Bacteria. Nothing seems to have escaped the author; the influence of diet on decay of the teeth, the use of antiseptics in the prophylactic treatment of decay, the antiseptic action of filling materials—a subject of very great importance,—are all gone into very thoroughly. As a result of his researches on the antiseptic and other properties of different stopping media, Professor Miller holds very strongly that copper amalgam fillings are very much superior to gold, oxychloride of zinc, or oxyphosphate of zinc. He considers that the film of oxide or sulphide of copper around the filling is absorbed by the surrounding dentine, which is thus protected by the antiseptic action of the copper salt. The process of sterilisation of teeth for the purpose of transplantation and implantation is fully described, and some most important points are insisted upon. We have, however, said enough to show the extent of ground covered by this admirable work of Professor Miller, and we can only strongly recommend a careful study of its contents to those who are engaged in carrying on the work of dental surgery, and to those who wish to obtain an accurate conception of what is known regarding micro-organisms of the human mouth. The book is well printed, and profusely illustrated with woodcuts, a chromo-lithograph, and two micro-photographic plates.

The Students' Atlas of Artistic Anatomy. By CH. ROTH, Professor of Sculpture at the Royal Academy, Munich. Edited, with an Introduction, by C. E. FITZGERALD, M.D., Surgeon Oculist in Ordinary to the Queen in Ireland. With twenty-four plates and ten explanatory figures. London: H. Grevel and Co. 1891.

THERE is an immense satisfaction for the intelligent artist in the full understanding of that which previously he has been unconsciously drawn to imitate. Art depends upon science for the means of studying the internal mechanism of the human body in order rightly to portray the outer form, representing the physical expression of the mind within. The arrangement of limbs, the treatment of surfaces and outlines, belong rather to the rules and technique of art, but a correct knowledge of proportion in the bulk of muscular masses, their limitations and variations with posture, can only be acquired by a comprehensive knowledge of anatomy.

The study of this subject from the cadaver or text-book has ever been the reverse of attractive to artists; and the fact, that both technical works and attenuated subjects are commonly more adapted to convey an intimate knowledge of particular and deep regions, than to give an explanatory and forcible illustration of the appearance of a living man, leaves the field open for some more directly appropriate treatment of artistic anatomy. Professor Roth in the present scheme has done much towards supplying such an educational want.

A living model is posed in imitation of a classic figure, the addition of a considerable weight to one extended arm lending force and reality to the effect. This figure serves as a basis for the anatomical lesson, which includes four separate views each of the nude figure, a careful preparation of the superficial muscles, and the articulated skeleton. In this treatment of the subject the most striking features are the correctness of disposition of the limbs, trunk, and head as regards balance and line of gravity, the proportional distribution of muscular force, and especially the compensating curves of the spine. Parallel sketches, with numbered references to the several parts, facilitate the recognition of anatomical structures, which are delineated with force and accuracy. It is a bold experiment to attempt to combine at once the classical, natural, and anatomical elements in drawing from the nude, but in this the author has succeeded remarkably well. The limitation to a single pose prevents all confusion and very much facilitates anatomical knowledge, whilst the addition of separate sketches at the end of the atlas furnishes opportunity for more detailed study of the limbs and head. The plates are admirably executed, the engraving being smooth and even, and at the same time sufficiently vigorous in the contrast of light and shade. Dr. Fitzgerald's translation of Professor Roth's work is altogether a valuable aid to the study of artistic anatomy, and is itself a work of art.

Theory of Physics: a Rectification of the Theories of Molar Mechanics, Heat, Chemistry, Sound, Light, and Electricity. By CAMILO CALLEJA, M.D. London: Kegan Paul and Co. 1890.

"THE aim of this work is to rectify the theories upheld at the present time in the treatises on physics and chemistry, whose fundamental principles have been by most authors set forth not only without connexion, but in a manner notoriously contradictory." These are the words with which the introduction to Dr. Calleja's little book commences. The learned author having discovered that nearly

all physical science is wrong, has devoted himself to the task of reconstruction, and has succeeded to his own entire satisfaction. The new discoveries are to be fully described in a great work on "Universal Physiology," of which this appears to be the second instalment. It is explained that the word physiology is here restored to its original application in science, in accordance with its just etymological derivation from the Greek language. We are promised three volumes in this "abridged edition": "One, 'General Physiology; or, Physiological Theory of Cosmos,' comprehending the analysis and synthesis of nature in general; another, 'Abstract Biology,' treating of the Special Synthesis of Living Matter; and another, 'Theory of Physics,' which is circumscribed to the special *analysis of the different kinds of material changes.*" In pursuit of the glorious aim of universal physiology the author has preferred the seductive realm of hypothesis to the laborious path of experiment. He does not seem to have been a profound reader or a practical worker in physical science. In this manner he has avoided bias, and thus doubtless he has quickened his critical insight, for he disposes of great names, theories, and facts with airy omniscience. We find with regret that Dr. Calleja does not think much of Newton's laws of motion, in which, however, he detects some germs of truth. But in regard to the nature of sound he is compelled to adopt a sterner method, by which not only the early master but also some of his successors are detected and exposed. In so grave an idictment we can only do justice to Dr. Calleja in his own words:—"In this work a rigid substitution for old ideas is made, and it has the light of truth to illuminate it. Therefore, though the most distinguished physicists like Newton, Tyndall, Mayer, Helmholz, &c., have admitted and defended the erroneous hypothesis of corpuscular agitation, probably for lack of something better, we must proclaim the theory of progenic oscillation, which is in perfect correlation with the facts and quantivalent of the interchanges between sound and other phenomena" (page 105). Those to whom this kind of scientific writing is attractive will find plenty of it in the "Theory of Physics," and to them we commend it.

OUR LIBRARY TABLE.

Notes on Pathology: General Pathology. By J. RYLAND WHITAKER. Edinburgh: E. and S. Livingstone. 1890.—These "notes," which traverse the whole range of general pathology, have evidently been compiled with great care. Together, they form an outline of the subject of which it will not be difficult for the student to fill in such details as he gathers from his lecturer or his text-book. The author himself recognises this as the main object of his publication, and we may say at once that he has done his work well, and that it should prove of much utility. In these days of "compendia" of knowledge, where the aim often seems to be to condense into as small a space as possible the facts of science, so that the student may be saved the trouble of learning them step by step, it is gratifying to find a writer who takes a higher view of the kind of assistance that the student needs. The information he conveys in his little work is considerable, and also accurate; in parts even—e.g., in the sections dealing with inflammation and the parasites—it is almost, if not quite, as full as is to be found in many a text-book. But it would be difficult for the student to use the work simply for the purpose of "cram." We believe, moreover, that teachers also may be glad of so concise a summary of the subject as Mr. Whitaker has given.

Twelve Lectures on the Structure of the Central Nervous System. By Dr. LUDWIG EDINGER, Frankfort-on-the-Maine. Translated from the Second Edition by WILLIS HALL VITTUM, M.D., and C. EUGENE RIGGS, A.M., M.D. Philadelphia and London: F. A. Davis.—The high reputation which Dr. Edinger's work has attained in the original German is ample justification for its translation into English—we had almost written American, but of the nationality of the translators there is indeed but little trace, except in what may be called the occasional Germanised English or Anglicised German, which is a well-known characteristic of much of the American medical writing of the present day. Of the matter of the work too high an opinion can scarcely be expressed. The author, as one who has observed carefully and laboriously the structures of which he writes, has his own views on several points, but he does not ignore the opinions of others or treat them in anything but a scientific way. His horizon is a wide one; he knows what has been done, and he recognises the limits of our knowledge, and all through the work his intimate acquaintance with all the details of his subject is manifest. The illustrations are excellent and numerous. We are reluctant to find fault with them in any way, but it cannot be denied that to the reader ignorant of German there is a drawback in having the illustrations named in that language, although the translations of epithets furnished reduce the difficulty to the smallest dimensions. The book is a valuable addition to the literature of the nervous system, and will, we doubt not, be widely read both in this country and in America.

Diseases of the Nose and its Accessory Cavities. By W. SPENCER WATSON, F.R.C.S. Second Edition. London: H. K. Lewis. 1890.—The first edition of this well-known work appeared fifteen years ago, and a perusal of the present issue indicates the enormous strides made in the branch of surgery comprised under the title. The new edition consequently contains much additional matter, though its bulk is considerably diminished by the smaller type employed. We find sections added upon skin affections, rhinoplasty, ear affections, &c., by other authors. The section on ear disease is a desirable addition, and is admirably discussed by Mr. Cumberbatch in the small space allotted to him. Turning to those points in which the study of nasal disease has particularly advanced, we are impressed by the elaborate and instructive article on the forms of chronic rhinitis. Yet we think that scant justice has been done to the improvements made in the treatment of hay fever, both in this country and in America. In fact, the only reference to this, the most prevalent of all nose diseases among well-to-do patients, is dismissed in a few words on page 42, nothing being suggested for the amelioration or treatment of the affection. Nor in the section devoted to the reflex neuroses of the nose is any mention made of the subject, although asthma is discussed, and an admirable *résumé* given of the theories maintained by Bosworth of New York. The sections on polypi remain as admirable as in the first edition, and the same may be said of ozæna. The account of post-nasal adenoids is just what is required, and may be strongly recommended. The volume is well illustrated, and the arrangements of the different subjects satisfactory, though we think an appendix of formulæ would be of considerable advantage to the practitioner. But, taking the book as a whole, the faults we find are of small importance; and as a guide to the study of diseases of the nose it cannot be but strongly recommended.

Materia Medica. Part II. Catechism Series. Edinburgh: E. & S. Livingstone. 1891.—This little book is primarily intended to aid the student in preparing for examinations, by "suggesting possible questions that otherwise might have escaped his notice." The writer apparently has but a poor opinion of the powers of "notice" possessed by the average student, so the questions are very numerous, and touch upon most details connected with the articles mentioned. Moreover, the answers to the ques-

tions are arranged in the type familiar from Brewer's "Guide to Science" or Magnall's "Questions." There is considerable danger to the student's chances of success if he ventures to reproduce these answers before an astute examiner—e.g., the strength of Fowler's solution and liquor arsenici hydrochloricus is given in an offhand way: "Like most of the poisonous liquors, 1 per cent." But no mention is here given of the names or strengths of the implied exceptions. If used only "the night before the examination" this catechism may usefully suggest sundry appreciative gaps; but students would be very ill-advised who relied upon the cramming it affords in place of a text-book.

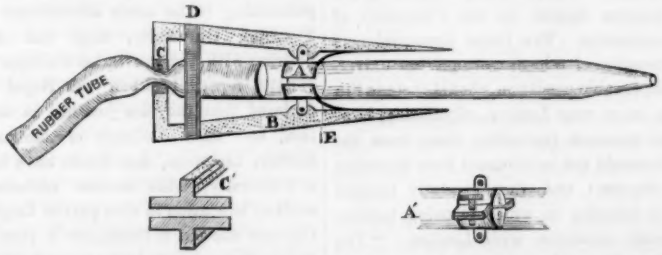
Outlines of Practical Physiology. By WILLIAM STIRLING, M.D., Sc.D. Second Edition, with 234 Illustrations. London: Charles Griffin and Co. 1890.—We have already stated the high opinion we entertain of this useful work. This, the second edition, has been thoroughly worked up to date. A large number of well-executed woodcuts have been added. It may be recommended to the student as one of the best manuals he can possess as a guide and companion in his physiological work, and as one that will usefully supplement the course given by a physiological teacher.

An Elementary Text-book of Physiology. By VINCENT T. MURCHE, Head Master of Boundary-lane Board School. London: Blackie & Son. Pp. 202.—This little book will prove useful to those for whom it is intended—namely, the students following the science and art syllabus. It gives a short but accurate description of the skeleton, and notices briefly the muscles, the organs of circulation, digestion, and respiration, the nervous system and senses. The woodcuts as a rule are good, those of the blood-corpuscles (on p. 71) and of the brain (p. 107) being exceptions. A useful feature of the book is the large number of questions which are interpolated between the chapters.

New Inventions.

AN IRRIGATOR REGULATOR.

THE figure shows a clamp for controlling the flow from the ordinary cistern irrigator. On the glass tube, forming the nozzle of the irrigator, is slipped the brass ring A, on which are hinged a pair of brass levers (B), each lever carrying a T-piece (C) at its proximal end. The rubber tube of the irrigator is nipped and closed between the transverse bars of the T-pieces, the necessary pressure being maintained by a rubber band acting at D, or by steel springs at E. The tube is opened to any degree by simply pressing on the distal ends of the levers, and it is automatically closed immediately this pressure is relieved. The advantages of this arrangement over the methods at present in use (clips, cocks, or pinching between the fingers) are that the *one hand* that holds and directs the tube has absolute control over the stream in diminishing or increasing its force, and the clamp automatically stops the flow the instant the tube is laid down or the pressure by the fingers relieved. This instrument is the design of Mr. T. W. Ogilvie, student of medicine, Aberdeen, and may be obtained from the maker, Mr. John Stevenson, School-hill, Aberdeen. The clamp is made with the simple ring A to fit one size of tube, and also with the screw adjustment shown at A′ to fit various tubes.



ALEX. OGSTON,
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MESSRS. KROHNE AND SESEMANN'S IMPROVED CHLOROFORM INHALER.

THIS inhaler is based upon Junker's chloroform inhaler, which has been some years before the profession, but is a very great improvement upon the original apparatus. As at present made, it consists of a two-ounce bottle, graduated in drachms, and supplied with an air-tight screw top, perforated by two tubes: one, the afferent, is connected by indiarubber tubing with a hand bellows like that used in Richardson's ether spray atomiser; and the other, the efferent, with the indiarubber tubing connected with the vulcanite face-piece. The afferent tube reaches almost to the bottom of the bottle, the efferent only just to half an inch below the stopper. Four or seven drachms of chloroform are introduced by unscrewing the top. The vulcanite face-piece differs from the original one in having a feather indicator which blows up in expiration and drops in inspiration. This is intended to act as a respiration indicator. The vulcanite face-piece also is replaceable by a Skinner's mask covered with flannel, the covering being removable for washing or replacement by a fresh flannel cap which stretches over the wire frame. An arrangement in the tubes permits of a continuous rather than an intermittent blast of chloroform vapour entering the face-piece; further, by having the central tube in the Skinner's mask perforated with numerous apertures, the blast of chloroform is diffused as an atmosphere rather than pumped as a jet against the face. There is also a graduated stopcock in the course of the afferent tube, the object of which is to regulate the amount of vapour passed out of the chloroform by restricting the supply of air. It is clear, however, that this object cannot so be obtained, as the amount of air passed through will not vary directly as the area of the section of the tube. It is estimated that each time the hand bellows is completely emptied 5·19 cubic inches of air are made to traverse the chloroform, and that one minim of that substance will thereby be volatilised; it is hence claimed that the percentage vapour of chloroform given off is always below that which is considered dangerous. The apparatus as now presented to us is undoubtedly an improvement upon the old inhaler, and affords one of the best methods at present before the profession for giving chloroform. It may be added that for operations in which the face-piece cannot be employed Messrs. Krohne and Sesemann supply a bent pliable metal tube, which can be used for anæsthetising through the nose or month. The vulcanite face-piece is supplied with a movable indiarubber band fitted with an air cushion for use when the vulcanite will not readily apply itself to the face.

THE LANCET.

LONDON: SATURDAY, APRIL 11, 1891.

THE "latest revised" scheme for the reconstitution of the University of London, which has been finally adopted by the Senate as the basis upon which the new Charter will be prepared, has now been sent to every member of Convocation, together with a memorandum explanatory of the scheme, and it is intended to present the draft of the proposed new Charter to Convocation for its consideration at the meeting on May 12th. Convocation will then have to decide on its acceptance or rejection, for it will not be possible to introduce amendments into the draft. Before Convocation says aye or nay, it will be well to see how far the scheme runs on the lines laid down by the Royal Commission, and who will be satisfied with its provisions, should Convocation accede to them, and permit them to be laid before the Lord President of the Privy Council as the basis of the new Charter desired by the University of London for its reconstitution. The Royal Commissioners recommended the formation of a local metropolitan university which, as an indispensable condition, should include the teaching institutions in or near London, stipulating, however, that any other students (including those from the provinces or colonies) should not be debarred from becoming candidates for its degrees; and they specially insisted on the unwisdom of bringing in other teaching institutions having no special connexion with London. "The University, so constituted, would not be what is wanted; it would not be a Teaching University in and for London." They also definitely remarked that "the great majority of London medical students, if they take a degree at all, take it elsewhere than in London, and that is a fact which the highest representatives of the medical profession view with regret. It is injurious, not to the men themselves only, but to the public." In opposition to these opinions, the new scheme of the Senate proposes to assign to the provincial Colleges a position in the University analogous to that given to the London Colleges; in other words, it endeavours to bring under the central control of Burlington Gardens all the University Colleges of Arts and Science in England and Wales, instead of adapting its organisation mainly to the London Colleges and medical schools, as was not only suggested by the Royal Commissioners, but was laid down by them as indispensable. It makes no alteration in the degree of M.D.; it retains the present standard for the Matriculation and Preliminary Scientific M.B. Examinations, although they are distinctly pointed out by the Royal Commissioners as requiring modification (par. 33), and hands over to a joint committee, formed by the Senate and the Royal Colleges, the other examinations for the Pass M.B. degree, although the Commissioners most strongly objected to giving such powers to Colleges which have no academical character. The constitution of the proposed new Senate is also absolutely different from that which was recommended by the Royal Commissioners. We cannot therefore expect that the Royal Commissioners will be satisfied with a scheme which is quite opposed in spirit and in working detail to that which they have advised. If it is not in accordance with the report of the Royal Commission, another question arises, Will it satisfy any of the bodies interested in the question? The voting of the Fellows of the Senate shows that an influential minority is opposed to the new departure, and that this includes many of the oldest Fellows, who are most regular in their attendance for the due despatch of the routine work of the University. A very large section of the members of Convocation will give their votes against the scheme, for, as is plainly and fairly shown in a circular sent to the graduates, the scheme will reduce the representation of Convocation on the Senate, make the degrees of the University of variable value, put the private student on a disadvantageous footing with the Collegiate student, lower the medical degree, and—most important of all from our point of view—not relieve the grievance of the London medical student. The London Teaching Colleges are not satisfied, and they are about to place their objections before the Lord President. It is scarcely to be expected that, since they have been petitioning to be made constituent Colleges of a local Teaching University, they will accept a coördinate position with the provincial Colleges in an imperial University, especially when the Royal Commissioners have declared that they are justified in asking for such a position, and when Colleges of similar standing at Manchester, Liverpool, and Leeds have been allowed to form a University, with marked advantage to general and medical education in that part of England. The provincial Colleges are not satisfied, for if they are to have coequal rights they should have coequal representation with the London Colleges; and from this point of view they have obviously been treated very unfairly by the scheme. The medical representation is worthless; the general representation is inadequate. The attempt to secure the control of these Colleges by the University of London comes rather late in the day. Birmingham and Wales are already moving for local Universities; and a glance at Scotland with its four Universities, and their beneficial action on Scotch education, is sufficient justification for insisting that these local movements shall not be choked by a centralised board in London. The London medical student will not be satisfied, for the present scheme does not remove the grievance under which he suffers. In the first place it will not enable him to call himself "Doctor" unless he take the M.D. degree, the conditions of which he is explicitly told will not be changed; therefore his taking the M.B. Pass degree by passing the Matriculation and Preliminary Scientific M.D. Examinations will only be illusory, for even then he will have no proper right to the title. In the second place, if those preliminary examinations are kept at their present standard, the average medical student will obviously be prevented from obtaining a degree on conditions similar to those on which it is to be obtained at other Universities. The Senate of the University has lowered its standard by its proposals for the Pass M.B. degree, and has not removed the obstacles which are in the way of the average London medical student, and which put him at an

unfair disadvantage with his fellow students in Scotland and the provinces. The Royal Colleges have accepted the proposed scheme, and as it confers upon them a practical monopoly in the education, examination, and fees of the London Pass medical student, it is not necessary to go further for their reasons in approving the scheme. The Royal Colleges will practically obtain everything which the Royal Commissioners expressly state should not be granted to them, and we cannot understand how the Senate of the University of London could have determined to insert into the scheme provisions which, as every medical man must know, really transfer the examinations of its Pass graduates in medical subjects to the medical corporations. Convocation cannot possibly be expected to sanction such an abnegation of the duty of the University.

IN his Lumleian lectures Dr. BROADBENT has returned to the ever-fresh and interesting topic of heart disease. He directs his attention almost exclusively to structural changes in the muscular walls of the heart, a department of the subject at least equal in importance to that of morbid changes in the valves. The medical student and the young practitioner are very apt to think that the recognition and correct classification of cardiac murmurs are his chief concern, but the wider our experience the more is the conclusion forced upon us that from the patient's point of view—i.e., from the point of view of prognosis and treatment,—the essential point is the integrity or otherwise of the cardiac muscle. Dr. BROADBENT says very truly that cases of structural change in the muscular walls of the heart are "far more numerous at and after middle life than those of valvular disease," and that "the early recognition of such changes is often of greater service to the subject of them than in the case of valvular affections, since it reveals the tendencies which are in operation, and often at a time when they can be successfully combated by treatment." This subject is further of great interest and importance since the cases are not few in which, while no murmur is audible, a careful consideration of all the facts will lead to the recognition of grave cardiac changes. Such cases are probably often overlooked, or, as Dr. BROADBENT says, "the only diagnosis ventured upon is that of 'weak heart,' a vague term which covers the entire ground from temporary functional debility to disease inevitably and imminently fatal." Who has not seen such a diagnosis made time after time, the real explanation of such temporising being the reluctance of the practitioner to admit the existence of organic disease in the absence of any recognisable murmur?

Dr. BROADBENT discusses hypertrophy and dilatation at length, and has much to say that possesses great interest and importance. In addition to the common and well-recognised causes of hypertrophy—viz., disease of the aortic and mitral valves, protracted high arterial tension, emphysema, and bronchitis,—he enumerates adherent pericardium, collapse of a portion of the lungs, contraction of a lung from pleural adhesions, fibroid phthisis, &c. The diagnosis of hypertrophy is comparatively easy. If the hypertrophy affect the left ventricle we shall have high arterial tension, possibly some bulging over the cardiac area, the apex displaced downwards and somewhat outwards, the impulse being "a circumscribed gentle heave," an increase in the area of cardiac dulness, some diminution in the distinctness of the first cardiac sound, and some increase in loudness of the second cardiac sound. With the recognition of hypertrophy there arises at once the question whether it is adequate to the maintenance of the efficiency of the circulation, or whether any signs of failing compensation can be detected. This is a most vital question, worthy of our utmost attention, and some of Dr. BROADBENT'S hints in this connexion are of great value. "The sounds of the heart," he tells us, "usually give notice when it is overtaxed by the resistance to the onward movement of the blood. The interval between the first and second sound may be prolonged, the systole requiring more time than under ordinary circumstances to complete itself. ..... When the systolic pause is lengthened at the expense of the diastolic, so that the sounds are equidistant, the period of repose and reconstitution of the muscular fibres of the ventricle is shortened, and their nutrition must in time suffer." Reduplication of the first sound of the heart is another sign that the organ is becoming unequal to the strain upon it. Dr. BROADBENT does not encourage the idea of the treatment of cardiac hypertrophy as such; but with regard to the treatment of the causes of hypertrophy he remarks that "we shall recognise the necessity of diminishing the volume and improving the quality of the blood by appropriate diet and hygiene, and, if necessary, by tonics. We shall recognise, also, the desirability of diminishing the resistance to the onward movement of the blood in the arterio-capillary network by care in diet, by aperients, and by eliminants of various kinds."

The subject of dilatation is even more interesting and important than that of hypertrophy. Usually both ventricles are involved, but the condition of the left is the more important. The practical effect of dilatation is that the ventricles fail to empty themselves during systole, and there are varying degrees of this failure. In connexion with the etiology of dilatation, it is extremely important to bear in mind that it often arises quite independently of any antecedent valvular defect. Violent effort of any kind, such as mountain-climbing, hunting, boat-racing, or athletics, especially in persons unaccustomed to severe exertion, may produce dilatation of the ventricles, incompetence of the valves as a necessary mechanical result of such dilatation, and possibly the long train of symptoms familiar to us as those of gradual cardiac failure. But such cases often do well under proper treatment, and may even recover completely. Among other causes of dilatation Dr. BROADBENT enumerates the onset of acute diseases, mental anxiety, injudicious hydropathic treatment, the Banting treatment of obesity, and the inhalation of the fumes of Himrod's powder for asthma. The physical signs of dilatation are not difficult of recognition. The pulse is irregular in rhythm and unequal in force of beat; it is also sudden, short, unsustained, and compressible. The artery at the wrist may be large or small, and the beat may be either regular or irregular. The apex may be displaced outwards and downwards; it is often not detectable by the eye, and it may be difficult to localise even by palpation. It lacks the heaving character and the distinct thrust

so characteristic of hypertrophy. Percussion shows that the area of dulness is enlarged, and more rounded in the apex region than normal. The first sound is short, and usually louder than normal; often there is a systolic apex murmur. The second sound is often weak, especially in the aortic area. An abbreviation of the systolic pause "is a serious indication of failure of the ventricles, and, when carried to an extreme, so that the second sound follows the first immediately, and almost seems to overtake it, is significant of immediate danger." As regards prognosis in dilatation of the heart, among the most grave points are obstinate nausea, loss of appetite, and sleeplessness, long continued and excessive frequency of the pulse, an approximation of the first and second sounds, a history of progressive cardiac failure, and a bad family history.

On the subject of treatment, Dr. BROADBENT treads familiar ground, but his remarks are worthy of the most careful consideration. He thinks the abstraction of blood is serviceable, chiefly where there is marked enlargement of the liver. Purgation, especially by mercurials, he considers as of great value in lowering arterial tension, and remarks how commonly other remedies fail until a mercurial purge has been given. Of the special cardiac remedies he places digitalis, of course, first, and recommends the addition to it of ammonia, ether, strychnine, or iron, according to the circumstances of the individual case. Strophanthus he has found most valuable when digitalis produces much sickness or fails in its effects. Citrate of caffeine, squills, and sulphate of spartein have also proved beneficial in his hands. Of convallaria he cannot say much.

We recommend these very interesting and practically valuable lectures to the best attention of our readers.

IT has often been a matter of speculation as to the ultimate destiny of the relatively large amount of iron which is ordinarily introduced into the human system as a tonic, and the good effects of which seem almost to be proportional to the largeness of the dose. It has several times been made the subject of experimental investigation, as, for example, by HAMBURGER, who regained from the fæces nearly the whole of the amount of iron salts that he had introduced into the stomach of a dog, a very small quantity appearing in the urine. This would appear to show that comparatively little of the metal was really absorbed from the intestine, although it seemed just possible that some of it might have been taken up and again eliminated through the same channel. It appears, however, that we must not regard the excess of iron in the urine as an index of the amount absorbed, since even when iron salts are introduced directly into the blood stream very little is excreted through the kidney. This is clearly shown in a paper by Dr. CARL JACOBI[1] of Strasburg, who had already in 1887 published, in his inaugural thesis, the details of several experiments on the point. A certain quantity of iron salts was injected subcutaneously or into veins, and the urine, as it flowed down the ureters, was received directly into a sulphide of ammonium solution. In that way the time of its first appearance in the urine, after the injection, could be accurately noted, as well as the time at which it ceased to appear; and finally, the total amount of iron thus eliminated could be gauged. The general result of such experiments was to show, after due allowance for normal excretion, that only between 2 and 4·5 per cent. of the quantity of iron introduced into the circulation could be regained from the urine.

The question which Dr. JACOBI now proposed to determine was as to the possibility in HAMBURGER'S experiments of much of the iron being absorbed and again excreted through the intestinal wall. He states that DU CAHN had found manganese introduced into the general circulation to be largely excreted through the intestinal vessels, as much as 14 per cent. passing thus within the first hour of the experiment. Dr. JACOBI'S results do not show that iron is thus eliminated to any large extent, for after its injection into the veins he could regain not more than 1·6 and 2·4 per cent. from the intestinal contents, nor more than 6·35 per cent. and 15·1 per cent. from the intestinal wall (inclusive of that which its tissues normally contain) in the two experiments made for this purpose. It was evident too that the elimination through the intestinal bloodvessels took place very slowly, and he did not get any support for the view that the bile carries off much of the metal. The next step, therefore, was to determine what becomes of all the salt which has been introduced into the blood. Is it retained there, or is it deposited and "fixed" in the tissues? The experiments on the urinary excretion showed that no more iron was eliminated after from two to three hours, a fact which might be explained either on the assumption that the kidney ceased to act as an eliminating organ, or else that the circulating blood had parted with its excess of this constituent. It was easy to show that the latter and not the former explanation was the true one, since a repetition of the injection into the veins caused a reappearance of iron in the urine, its presence therein being again limited to from two to three hours.

The inference that the major quantity of iron taken into the circulation must be deposited in the tissues was clearly proved by an analysis of the liver and spleen, which organs yielded (especially in the case of the liver) a very large proportion of the metal, even when due allowance was made for the blood which was still retained in their vessels. Hence the general conclusion that not more than 10 per cent. of iron salts directly injected into the blood is eliminated by the urine, or the intestinal and biliary secretions; that the main quantity—viz., 50 per cent.—is deposited within the liver, and the rest in the other organs, such as the spleen, kidney, and intestinal wall,—a deposition that must be completed within from two to three hours of the period of the introduction of the iron into the circulation. These observations would, therefore, seem to justify the opinion, long since expressed, that the excess of iron found in the liver in cases of pernicious anæmia is (in part at least) derived from previous ferruginous medication. Of course it does not in any way conflict with the further explanation offered for the presence of such an excess of iron in the liver in this disease—viz., that it is due to blood disintegration. Furthermore, Dr. JACOBI'S experiments serve to confirm the fact that the amount of iron absorbed

[1] Ueber das Schicksal der in das Blut gelangten Eisensalze. Archiv für Exp. Path. u. Pharm., Bd. xxviii., Hft. 3 u. 4.

from the intestinal membrane is comparatively small, since HAMBURGER'S recovery from the intestinal contents of the large proportion of the amount introduced into the stomach cannot be explained by elimination through the intestinal secretions. Still, it cannot be said that we have as yet any sound explanation of the empirical fact that the tonic or hæmatinic action of the metal is often best exerted when it is administered in quantity far in excess of that which is actually absorbed.

WE find that a correspondence has recently been published in the public press as to three cases of scarlatina which were notified by Mr. J. C. O'HANLON of Tudhoe to the local medical officer of health. The three certificates were returned with the statement that the health officer had found the attacks to be measles, a statement which was, however, not supported by Dr. FREDERICK PAGE of Newcastle. But with the diagnosis we do not concern ourselves so much as with the mischievous practice of going behind medical certificates of notification except in cases of a character so grave as to necessitate such action by a public officer. In this instance the circumstances were submitted to the judgment of the Local Government Board, and they have distinctly stated in answer that "they do not consider that either the Infectious Disease (Notification) Act, 1889, or any Order of the Board imposes on a medical officer of health any obligation to visit each case notified to him under the Act, for the purpose of testing, by personal examination of the patient, the accuracy of the certificate," and they go on to say that it appears to them that "it would usually be inexpedient" that the medical officer of health "should undertake such an examination unless he has reason to believe that the certifying medical practitioner is not acting in good faith."

This letter comes opportunely, and we hope that it may serve to put an end to a practice which is most objectionable, and which tends to bring the public health service into disrepute. We have more than once admitted that there are possible circumstances when such examination of the sick by the medical officer of health may be necessary, but the Local Government Board have materially limited the scope of such action by specifying the main condition which can be held to justify it. And we would gladly have it understood that when a medical officer of health goes behind the back of a fellow medical practitioner, in order to test his diagnosis, he lays himself open to the charge that he is regarding such medical practitioner as not acting in good faith towards the public and the sanitary authority.

But there is another aspect of the question. A number of niggardly sanitary authorities, whose main object seems to be to save the paltry fee by means of which they acquire information that is of great value for public purposes, are only too glad to request the judgment of their medical officers of health on the accuracy of each separate certificate, in the hope that they may differ from it, and they have actually instructed their officers to visit each notified case on their behalf. No such duty of visiting every case of infectious disease that was heard of attached to medical officers of health before the passing of the Notification Act, and the Local Government Board have laid it down on more than one occasion that, whilst that Act gave to sanitary authorities and their officers increased sources of information, it imposed no new duties whatever on medical officers of health. In other words, sanitary authorities have no power to require compliance with such a request; and we hope that, for their own protection as well as in the interests of professional courtesy and of the public health service, medical officers of health will resist this attempt to make them serve as detectives in a system of espionage which is as unwarrantable as it is discreditable to the profession. Should occasion ever arise to advise a sanitary authority to refuse a notification certificate on the ground of the disease being wrongly entered, the medical officers of health who feel compelled to give such counsel should regard the matter in a serious light; they should set forth in writing the reasons which have led them to act thus; and having submitted the case to the sanitary authority they should leave that body to communicate their decision to the medical practitioner concerned. Apart from formal action of this sort no dispute should be allowed to appear between medical colleagues, and medical officers of health should be the first to resent the imposition upon them of any duty tending in such a direction.

THE question of the significance of albuminuria must still be regarded as, to a certain extent, *sub judice*. Professor SENATOR, in the second edition of his work upon albuminuria, has recently reiterated his views that albumen in the urine is, in a certain considerable proportion of cases, physiological in character; while in France the opposite view has been vigorously maintained by Dr. LECORCHÉ and Dr. TELAMON. This is one of the cases in which it is particularly desirable to use terms regarding which there can be no ambiguity. If we speak of albuminuria as "physiological," we should naturally be presumed to mean that the presence of albumen in the urine is a normal occurrence. But we do not apprehend that this is asserted by any competent authority. The most that has been urged on this side of the controversy is that in a considerable proportion of persons, varying from 20 to 25 per 100, apparently in perfect health, albumen may be found in the urine, if sufficiently exact tests be applied. We fail to see how a phenomenon only to be found at the most liberal estimate in one person out of four or five can be correctly designated as "physiological." On the other hand, if we employ the term "functional albuminuria," we merely imply that albumen may be present in the urine without such organic changes in the kidney as can be detected, and this position is now, we conceive, almost universally admitted. The real point at issue—and the controversy, so far from being a verbal one, is really of the most vital pathological interest and importance—is whether the renal epithelium, when structurally sound and functionally efficient, ever allows the transudation of albumen. Two examples will render the real point at issue more readily apprehensible. It is admitted that minute quantities of sugar can be found in the urine without pathological significance. The question is whether "functional" albuminuria is to be placed in the same

category as this, or whether it is rather analogous to those changes in the gastric secretions which accompany some forms of dyspepsia, but which pass off without structural change in the stomach or obvious impairment of health.

SENATOR believes that the aqueous constituents of the urine are the result of filtration and not of secretion. He attributes to the endothelial cells of the glomeruli a physical rather than a physiological function, and compares their action to that of the endothelium of serous membranes, which, under the influence of the blood pressure, permit the transudation of serum containing a certain proportion of albumen. To this contention LECORCHÉ and TELAMON reply that if the urine is a simple transudation we should expect to find it, like the serous effusions, uniformly and obviously albuminous. They share the view of HEIDENHAIN that the glomerular epithelium exercises a selective action and opposes the transudation of albumen. If this be admitted to be its function, it would obviously follow that albuminuria can never be a normal phenomenon. SENATOR recurs to the analogy of sugar in the urine, and argues that, just as more exact methods of examination have shown the presence of sugar where it was not previously suspected, and in persons in good health, so the same methods show the presence of albumen under similar circumstances; and that, if we regard all albuminuric patients as potential subjects of Bright's disease, so ought we to regard all glycosuric patients as potential diabetics. Argument from analogy is usually hazardous, and rarely convinces an opponent. In order that SENATOR'S position should be maintained it would be necessary to show that the amount of albumen in the urine bears some proportion to the amount of albumen in the blood, just as the amount of sugar in the urine undoubtedly bears some proportion to the amount of sugar in the blood. But this position does not seem to be maintained by anyone, and is, indeed, obviously untenable. It would, further, be necessary to show that it is possible to have abundant albuminuria without structural change in the kidneys, since there is no question that abundant glycosuria may coexist with integrity of those organs; but this is unproved and extremely improbable. On the whole, we are disposed to doubt whether any useful analogies can be drawn between albuminuria and glycosuria. The pathology of the latter affection is extremely obscure, but it is certain that the kidneys are not the organs primarily at fault.

SENATOR attaches great weight to the admitted fact that a considerable proportion of persons have albumen in the urine without any other sign of impaired health. But to infer from this that the albuminuria is "physiological" is to go beyond the facts. The patient may suffer from excessive secretion from the nostrils, or from too free perspirations, or from slight habitual looseness of the bowels, without obvious impairment of health, but we should not, therefore be justified in designating such symptoms as "physiological." We should rather say that there was some departure from health, but too slight to derange the general equipoise of the functions.

It is significant that these cases of transient albuminuria are most frequent in persons who are undergoing some severe and unusual strain, whether mental or physical. They are common among young men preparing for examinations and common among soldiers during the period of military service. The most obvious inference from such considerations would be that the albuminuria is a sign that the system is being overtaxed; that it is, in fact, as Professor GAIRDNER has happily designated it, a "danger signal." Another significant fact is the increasing frequency of albuminuria with advancing years, and with this fact must be correlated the other significant fact that in necropsies upon elderly persons organic changes in the kidneys are the rule rather than the exception.

SENATOR lays down some points which he regards as characteristic of "physiological" albuminuria. 1. The absence of any other morbid sign. 2. The small quantity of the albumen. He fixes 0·4 or 0·5 per 1000 parts as the maximum. 3 The normal composition of the urine regarding its other elements, and especially the absence of casts and formed elements. 4. The short duration and transitory character of the albuminuria. The difficulty is to see how it is possible to affirm that these characteristics might not be found in cases of slight but genuinely pathological albuminuria. The quantity of the albumen is certainly of itself a sign of no value whatever. Nothing is more common than to find the albumen decrease in amount in cases of acute Bright's disease until the merest trace is visible. Nor can casts decide the question for us. We may fail to find them in cases of Bright's disease; while, on the other hand, they are probably sometimes present in otherwise healthy urine.

This whole discussion, however inconclusive for the present, has undoubtedly served a good purpose in emphasising the fact that albuminuria is in certain cases a trivial and transient affection, and that our prognosis must not be too grave until we have had time to take fully the bearings of a case and to form a sound opinion as to its probable course. It would, however, be a much greater and more disastrous error to imagine that albuminuria is ever to be regarded without apprehension, and without a clear realisation of its ultimate dangers.

AMONGST the very many curious and interesting details revealed in the course of the evidence given before Sir LYON PLAYFAIR'S Committee on British and Foreign Spirits, few will cause a more widespread feeling of dismay than those which indicate the extent to which ether is now being employed as an intoxicant in the north of Ireland. For many years ether intoxication has been noted as a vice which was rapidly gaining ground. Nearly fifteen years ago the practice was first referred to in the columns of THE LANCET, and during the interval there have been frequent indications that, in spite of numerous obvious discomforts, the use of ether has been extending in an insidious fashion. The vice, although in isolated instances believed to be rather widely spread, seems to have formed its greatest stronghold in a comparatively small district in the north of Ireland. Rather more than two years ago, at a meeting of the Cookstown Young Men's Christian and Literary Association, the prevalence of ether drinking in the surrounding district led to a resolution, praying that "in any Bill dealing with the liquor question in Ireland a clause may be inserted, placing the houses in which ether

is sold at present under similar restrictions as licensed spirit dealers' houses, or else restrict the sale of ether to houses licensed at present." That these recommendations would have been insufficient to check the consumption of ether may be inferred both from the evidence given before the committee and from the details in the very striking article on ether-drinking in Ireland which was recently published in *The Times*, since it appears that in country districts supplies of ether are obtained from retail chemists, from publicans and grocers, and from hawkers or dealers; it seems that the largest portion is supplied by the chemists, who of necessity always present the greatest difficulty to all concerned in the regulation of the sale of intoxicants and of poisons. The controversies which have surrounded the sale of the so-called medicated wines have led to the adoption of stringent measures calculated to make the unrestricted sale somewhat difficult. It will be remembered that the Excise authorities considered medicated wines liable to duty, when the dose recommended appeared to render it probable that the wine was employed as a beverage rather than as a drug. The sale of ether is not, however, surrounded by any difficulties; it does not even figure in the schedule of poisons, though the amount of safety ensured by the schedule is relatively small. Provided that the purchaser is known to the seller, and that the former is willing to sign an entry noting the date of sale, the name and address of the purchaser, the name and quantity of the article sold, and the purpose for which it is stated to be required, no one need experience trouble in obtaining any quantity of any poison named in the schedule. But for the proper restriction of the sale of medicated wines and of poisons the only real safeguard is an accurate knowledge of the *intent* of the purchaser. With the sale of ether as an intoxicant there can be no doubt of the intent, and it becomes all the more important in the interests of the community to devise measures to arrest its employment.

The chief circumstance which appears to favour the spread of ether drinking is the relatively cheap price of the fluid. It is asserted that "methylated ether," the impure compound employed, is so very cheap that persons may get "gloriously drunk" for fivepence. This form of ether is prepared from methylated spirit which is absolutely exempt from duty. The immediate effects produced seem to follow closely those of ordinary intoxication, but they are more rapid in their onset and in their disappearance. The quarrelsome stage has not been noted, the wave of subdued excitement and unsteadiness of gait being quickly followed by elevated ideas. "The surroundings seem a veritable fairyland, and the victim for the time being is utterly devoid of any care or trouble." Insensibility quickly ensues, but lasts only from half an hour to three-quarters, and then the person awakes dazed, but perfectly sober and depressed. The quantity required to produce these effects varies from one to four drachms. Considering that this amount is taken neat, only being followed by a small quantity of water, it is not surprising to learn that dyspepsia is a frequent after-effect. More serious than this, however, is the undoubted increase in insanity in the districts where the vice is most prevalent. So far as is known at present, ether drinking does not lead to any chronic disease of the liver or kidneys, its elimination during respiration being so very rapid.

The numerical statements made in *The Times* have already been challenged as being exaggerated, but it is to be hoped that this may not hinder the object in view. Every cause which is pursued with crusader-like diligence is apt to suffer from excess of zeal. The national instinct for fair play may unconsciously call into existence the *advocatus diaboli*, who has an easy task in refuting wholesale exaggerations. Reforms of other kinds of intemperance have before now been rendered tedious owing to a few rash statements. With regard to ether, however, as an intoxicant, numerical details are of little moment; the exact proportion of the population indulging in this practice, or even the identification of their social status, may be disregarded in view of the obvious importance of arresting the spread of the vice.

Perhaps one of the most curious contradictions connected with the spread of the mania for ether is that it has followed closely upon energetic efforts for stamping out ordinary alcoholic intemperance.

Annotations.

"Ne quid nimis."

FACTORY SURGEONS AND THE FACTORIES BILL.

The Times of Monday last contained a letter from Mr. Francis H. Walmsley, President of the Association of Certifying Surgeons, on the unfortunate proposal of Mr. Matthews, in the Factories and Workshops Bill, to do away with certifying surgeons. He says it is probable that the average cost of the work of factory surgeons to each employer does not exceed 40s. a year. It is to be regretted that Mr. Matthews seems to have listened too exclusively to the representations of the employers in this question. He has spoken throughout as if the duty of the surgeon were limited to merely certifying to the age of the person applying for employment, whereas the surgeon has to certify to having personally examined such person, and ascertained that he is not incapacitated by disease or infirmity. This is a very large duty, and the facts adduced in our columns show that it has been well discharged. Mr. Matthews would do well to take further evidence from the officials of the Certifying Surgeons' Association. The discussions on the proposals to leave out Clause 19 dealing with this subject will probably be carried on at the next sitting of the committee, or at all events on Thursday next, and no time is to be lost in supplying every individual member of it, and members of Parliament generally, with facts illustrating the work that has actually been done by the certifying surgeons. The whole drift of the evidence is to show that, so far from curtailing the work and the authority of the factory surgeon, both should be extended.

A SENSELESS HOAX.

AT Plymouth last week a number of letters, all evidently written by the same person, were posted to the various medical men of the district requesting their attendance at a given address and hour—one o'clock in the day. The whole arrangement was of course a hoax, and the inconvenience and annoyance thus imposed, not only upon the insulted practitioners, but upon the occupants of the house in question, can easily be understood. The trick, however we regard it, has much more disgraced than it can have gratified its originator. If an effort of spite against the householder, it was in this respect, and in its

total unconcern for the time and occupation of many besides, as miserably petty as it was heartless. If a joke, it was but a poor and a clumsy one, beneath laughter, and but for its practical inconvenience beneath notice. There is nothing clever in such witless imposture, and the kindness of true humour is entirely wanting. We have, instead, only another illustration of the fact that the practical joke is commonly associated with some badness of heart. For the silly perpetrator there is much to be desired, but especially the attainment of moderate wisdom and of ordinary good feeling, for the injured public such tardy satisfaction and hope of security in future as would follow the discovery and exemplary punishment of the culprit. The authorities, we are pleased to learn, are not unmindful of the necessity for such remedial treatment.

THE COLLEGE OF PHYSICIANS AND THE MIDWIVES' BILL.

THE College of Physicians is understood to have reported in favour of legislation on midwives, but to have urged inquiry in the first instance by a select committee. There is a great consensus of opinion now in this direction, which will doubtless be duly considered by the Government, on whom the responsibility now rests. The present Bill is down for second reading on the 14th, but it is blocked by three adverse motions, and there is very little probability of its making further progress.

THE ALKALOID OBTAINED FROM THE TUBERCLE BACILLUS.

GREAT interest is naturally attached to the various experiments which have been made in regard to the pathological chemistry of the tubercle bacillus. Although we are now in possession of a pretty full knowledge of the mode of action of the products of the tubercle bacilli as exhibited by the recent experiments made in all parts of the world with tuberculin, we as yet know comparatively little of the chemistry of this substance. An alkaloid was obtained from the products of the anthrax bacilli by Dr. Sidney Martin, and Professor Zuelzer has succeeded in obtaining a similar body from the bacillus of tuberculosis. A short account of Zuelzer's mode of isolating the alkaloid is given in the *Wiener Medicinische Wochenschrift*, No. 10, 1891. The entire contents of the tubes in which the pure cultures were made were repeatedly treated with hot water acidulated with hydrochloric acid. The solution was filtered, evaporated, and then several times precipitated with platinum chloride; the double salt decomposed by sulphuretted hydrogen, and the liquid again filtered and evaporated to dryness. In this way an almost white crystalline salt was obtained, which was easily soluble in hot water, but with great difficulty in cold. Its solution was light yellow in colour. After keeping for some time the dry salt assumed a light-brown colour. The chloride when injected into rabbits and guinea-pigs exhibited a characteristic toxic action; about one centigramme injected subcutaneously produced after from three to five minutes an increase in the frequency of respiration, the movements reaching 180 per minute. This continued for about a quarter of an hour, when the rate gradually became slower. The temperature rose in two out of the ten observations from normal to 100·2° F. Another constant symptom was well-marked protrusion of the eyes, which also appeared bright and shining, with somewhat dilated pupils. The sclerotic was considerably injected. It was remarkable that the protrusion of the eye was more marked on the side on which the injection had been made than on the other. All these appearances disappeared in from fifteen to twenty minutes. Toxic symptoms only showed themselves in three rabbits, and these had received somewhat larger doses, between two and three centigrammes having been administered. Death usually occurred somewhere between the second and fourth days. At the site of injections there was considerable redness, and small hæmorrhages were found in the muscles immediately beneath. Small effusions of blood were also found in the mucous membrane of the stomach and small intestine. In two cases effusion occurred into the abdominal cavity. The brain was, as a rule, soft and congested. Almost precisely similar results followed the injection of the alkaloid into the conjunctiva.

THE EFFECT OF ASPARAGUS ON THE URINE.

ONE of the curious by-ways seldom explored by science is that which Professor Nencki of Berne has lately investigated (*Archiv f. Exp. Path. u. Pharm.*, Bd. xxviii., Hft. 3 u. 4). It is, namely, the determination of the familiar change in the odour of urine that follows on the eating of asparagus. Hilger attempted to isolate the body causing this odour, by distilling the urine passed after a three days' diet of this vegetable, but he could not arrive at a definite result. Professor Nencki, availing himself of the good offices of four of the workers in his laboratory, who substituted for their midday meal a repast of asparagus, collected the urine passed by them up to 8 P.M. on the same day, acidulated it with oxalic acid, and distilled it over a sand bath. The volatile products were conducted into a solution of cyanide of mercury, causing a precipitate therein; and this, together with a similar deposit obtained by another trial, was collected, washed, and, being treated with a small quantity of a 5 per cent. solution of hydrochloric acid, was again heated—the vapour, which had the characteristic odour of methyl-mercaptan, forming a bright-yellow crystalline deposit in a solution of plumbic acetate. The odoriferous body in the urine is therefore in all probability methyl-mercaptan. Previous experiments by Prof. Nencki and M. Sicker have shown that this substance is one of the products of fermentation of albumen, and also of gelatine, and that it forms one of the constituent gases of the large intestine. Indol and phenol are also derived from the putrefaction of albumen, and it is probable that other sulphur-holding bodies are similarly derived. As to its connexion with asparagus, Professor Nencki quotes an interesting communication from Dr. O. Loew of Munich, to the effect that asparagin contains an organic sulphur compound, and that it is highly probable that methyl-mercaptan is formed in the albuminous disintegration which takes place in the germination of the plant.

ARMY MEDICAL EXAMINATIONS.

ON Saturday the Secretary for War issued an order directing that in future no candidate for admission to the Army Medical Service shall be allowed to compete on more than two occasions. We presume that the intention of this is to prevent a rejected candidate from coming up repeatedly for examination in the hope of being ultimately successful when he has not in the meantime been really working to qualify himself for the appointment.

PRESSURE ON THE OPTIC TRACT.

A CASE of some interest is recorded by Dr. Oliver of Philadelphia in the "Archives of Ophthalmology," vol. xx., No. 1. The patient came under observation in April, 1889, complaining of stiffness and weakness in the right foot. Six months later he had several attacks of spasm of momentary duration, affecting the right hand and arm, associated with extension of the leg on the same side. The right hand and arm were weak, the knee-jerk on this side

was exaggerated, and ankle clonus was present; vision was reduced, and right homonymous hemianopsia was present, the left fields being also contracted, much more markedly on the left side. The colour fields were also reduced in a similar way, and Wernicke's hemiopic pupillary reaction was very well marked. There was a large hæmorrhage over the lower outer quadrant of the right disc, and the veins were enlarged and tortuous. The diagnosis of a tumour pressing on the left optic tract was made, with probably some irritation of the right tract; and at the necropsy, which took place some weeks later, a glio-sarcoma was found invading the left optic thalamus and corpus striatum, and pressing upon and flattening out the left optic tract.

FIRE INQUESTS.

WE observe that a Bill has been introduced into the House of Commons by Mr. Brookfield, and read a first time, to provide for the holding of inquests into the origin of fires. We shall take an opportunity of expressing our views on the matter when a copy of the Bill comes before us.

THE TREATMENT OF SCLERITIS AND EPISCLERITIS.

DR. NORSA has communicated to the Società Lancisiana of the Roman Hospitals an account of three cases of scleritis and episcleritis which he was able to cure completely in a very short time by means of the medicated galvanic eye-bath, though they had been treated by ordinary internal and external methods for some years without success. His idea is that, whether this affection be of rheumatic, gouty, or syphilitic origin, external remedies applied in the ordinary way act too superficially, and internal ones too slowly, to do much good, and that therefore it is necessary to intensify the local action of whatever remedy is applied locally, which can best be done by means of the galvanic current. The medicament he employed was the salicylate of lithia in a 1 or 2 per cent. solution. This was used tepid. The strength of the galvanic current was from 1 to 3 milliampères.

PATHOLOGY OF MORVAN'S DISEASE.

A CASE recently published seems to place almost beyond further discussion the pathological anatomy of this curious disease. Joffroy showed at a lecture at the Salpêtrière in December last a patient with the trophic changes in the fingers very pronounced. Indeed, several of the phalanges had necrosed, and the opinion was expressed that although the condition was what is known as Morvan's disease, this was in all probability a form of syringomyelia. The patient died a month or two later, and the necropsy revealed the presence of the condition which had been predicted. There was a large cavity in the centre of the cord, the whole of the central region had been destroyed, as well as the right posterior horn, while the left posterior horn and the posterior tracts were also affected. The author, on the strength of this and another case which he has seen, comes to the conclusion that Morvan's disease is only a clinical form of syringomyelia.

THE PULMONARY COMPLICATIONS OF STRANGULATED HERNIA.

FROM an article by Dr. J. Lesshaft, of the Berlin Pathological Institute (Virchow's *Archiv*, 123, iii.), it would appear that the frequency with which pneumonia follows upon the reduction of strangulated hernia—operated on by taxis or by herniotomy—and the relation which such lung trouble bears to the intestinal lesion have both been variously estimated. Dr. Lesshaft is mainly concerned in correcting the impression conveyed by Dr. v. Pietrzikowski, who has recently maintained that pneumonia (as judged by clinical signs) is comparatively frequent in these cases, and who further supports the views held by Gussenbauer as to its causation. These views refer the pulmonary condition to embolism following upon thrombosis in the veins and capillaries of the walls of the strangulated bowel, in those cases at least in which no other explanation—e.g., by direct extension from peritonitis or pyæmia—can be afforded. Dr. Lesshaft, on the contrary, after an analysis of all the fatal cases of hernia examined at the Berlin Pathological Institute during thirty years, thinks the hypothesis of embolism is not justified on pathological grounds. He shows that the circumstances under which pneumonia occurs as a sequel to strangulated hernia, and the character of the pulmonary lesions, are such as may well be explained by the entrance into the air passages of vomited matters. The condition, therefore, is one of *Aspirations-pneumonie*, or *Schluck-pneumonie*; and that it should be more liable to occur in cases of severe strangulation, or those in which gangrene of the gut takes place, is not surprising, since these are just the cases in which vomiting is most likely to be severe. Pietrzikowski has adduced experimental proofs in support of his thesis, which, however, are not substantiated by Dr. Lesshaft, who found that in the rabbit pneumonia never followed artificial strangulation of the intestine; and in the dog it only occurred when it was possible for the aspiration of vomited matter to take place. Indeed, Dr. Lesshaft is convinced that pulmonary infarctions do not occur in connexion with the intestinal changes.

MR. JUSTICE STEPHEN.

THE retirement of Mr. Justice Stephen from the judicial bench, under medical advice, was on Tuesday last made the occasion of an impressive ceremony at the High Court of Justice. In the presence of the judges, and a large assembly of members of the legal profession, the Attorney-General tendered on behalf of the Bar an expression of respect which will be echoed by a larger circle than the speaker assumed to represent. The retiring judge responded in a few well-chosen sentences, and then withdrew from the scene of his public labours into what will, we trust, prove to be an agreeable privacy. Sir James Stephen is, as the Attorney-General said, a man not likely to be long in quest of an avocation, and it may well be hoped that both he and the public, which has learnt to set a high value upon his literary work, will profit by the cultivation of his well-earned repose. The custom which obtains among wearers of the ermine of devoting their entire strength to the duties of their office is one which we should hesitate to blame even in the gentlest terms; it is so closely associated with the virile virtue of single-minded devotion to duty. But there is a pleasing dignity in the act of retirement when a public servant who has fairly earned his discharge anticipates the inevitable hour and betakes himself with unbroken powers to leisure tasks. It was at one time supposed that Sir James Stephen entertained a reluctance to such a course, which, had the fact been so, those would most have regretted who respect him most and most sincerely wish him well. We are glad now to learn that his sentiment is very much the reverse, and that in resolving to retire at once he has been chiefly influenced by the representation that repose will be conducive to his health. We trust that the expectation may prove well founded, and that he will long continue to adorn the society to which from henceforth he will belong in a somewhat new character.

OPTIC NEURITIS OR PAPILLITIS.

ALTHOUGH Dr. Bull, in his recent paper in the *New York Medical Journal*, has nothing new to offer in the way of an explanation of the pathology of optic neuritis, he gives very succinctly a description of the different theories which have

been advanced to explain the condition, and he emphasises many of the most important and least known facts in connexion with it. He recognises three varieties: (1) Simple hyperæmia or congestion without swelling, a condition of doubtful significance; (2) papillitis or œdema of the disc; (3) a more advanced condition than the last, associated with increased swelling of the disc and the occurrence of hæmorrhages, and signs of strangulation of the papillary vessels. It is evident that the last condition only differs in degree from that immediately preceding it, and it cannot be said that the subdivision helps to elucidate matters. The most rational division seems to be one into papillitis and neuritis if the division can be made. Neuritis in other localities is associated with loss or impairment of function, and there seems no reason why the optic nerve should differ from other nerves. Yet it is well known that many cases are described as optic neuritis in which there is no evidence of impairment of function in the optic nerve, and it is for ophthalmologists to say whether those cases are correctly so described or not. It cannot, however, be too strongly insisted that a condition which, in the great majority of cases, is associated with gross intra-cranial disease is often present for months without obtruding itself by any subjective visual symptoms, and that it only becomes manifest on ophthalmoscopic examination.

CHLORIDE OF ETHYL AS A LOCAL ANÆSTHETIC.

As a substitute for ether spray as a local anæsthetic M. Monnet has introduced a method of freezing by means of chloride of ethyl, which is highly spoken of by Dr. C. Rédard, clinical professor at the Geneva School of Dentistry. Chloride of ethyl is a colourless liquid possessing an ethereal odour, with a boiling point of 50° F. It is hermetically sealed in glass tubes containing ten grammes, one end being drawn out into a fine point. When required for use the point is broken off with a pair of forceps, or by hand, at the narrowest part, which is marked by a file scratch on the glass, and the warmth of the operator's hand is sufficient to cause a very fine jet of the chloride to be projected on the part to be anæsthetised. One great advantage claimed for this method is that no apparatus is required, and its use is advocated in such cases as tooth extraction, neuralgia, &c.

PARISH ASYLUMS FOR THE BLIND AND DEAF-MUTE.

A CHANGE in the internal management of workhouses and parish infirmaries is now in contemplation which, if carried out, should materially aid those affected by it. This will consist in separating from the other inmates all blind and deaf-mute persons, whom it is intended to accommodate in specially appointed institutions. There, by means of association, recreation, and technical training, it may be hoped that the tedious leisure of lives now unduly isolated would be relieved and profitably occupied. The proposed arrangement is open, so far as we can see, to no serious objection which might counteract these advantages. One possible drawback would be the absence of healthy contact with the seeing, hearing, and active outer world. This, however, would be by no means a necessary consequence of the scheme if it were put in practice. The benefits conferred by an institution which would liberate a small afflicted class from the mass of a relatively sound and somewhat unsympathetic majority are compatible with all reasonable freedom of intercourse. These remarks, however, apply chiefly to the case of adults. Institution training has not produced the best results in the case of destitute children. For any such who may be blind or mute the boarding-out system is clearly preferable wherever it can be combined with the special instruction provided in certain Board schools for pupils in their condition. Thus the habits of independence fostered by ordinary home life would flourish without check to the culture of the lacking sense.

CHRONIC RHEUMATISM AND THE NERVOUS SYSTEM.

A NOVEL and suggestive, if somewhat revolutionary, theory in reference to the dependence of chronic rheumatic joint changes on a morbid condition of the central nervous system is advocated in a work by Dr. Wichmann, of which an abstract is furnished in a recent number of the *Centralblatt für Klinische Medicin*. The author began his work six years ago, with the view of explaining the nervous symptoms associated with rheumatic joint affection, and the dependence of those upon a central cause was first suggested by the occurrence of symmetrical phenomena such as patches of erythema, subcutaneous nodules, &c. Charcot has explained the occurrence of contractures in rheumatism by supposing that there is an inflammation of the articular nerves, the influence of which is transmitted to the centres in the cord, there giving rise to irritation of the motor roots; and the fact that the contracture is usually in the flexed position is explained by the greater power of flexors as contrasted with extensors. But it is pointed out that this would not explain the occasional occurrence of extensor contraction, and that, moreover, in other conditions giving rise to joint affection, such contractures do not take place. Further, as supporting the theory of a central lesion for those conditions, attention is directed to the occurrence of arthropathies in tabes and other spinal conditions, and it is contended that a feasible explanation of the vaso-motor and trophic disturbances—such as "glossy skin,"—as well as of the disturbance of sensibility, is offered by such a hypothesis.

THE SALE OF NARCOTIC AND ANODYNE DRUGS.

THE evils which result from over-indulgence in narcotics and anodyne medicines have impressed themselves strongly on the minds and imaginations of the American people, and the opinion seems to be widespread that one of the chief factors in the perpetuation, if not the production, of the vice is the facility with which those drugs can be obtained. At a recent meeting of the American Society for the Cure of Inebriety steps were taken with the view of procuring legislation on the lines of a resolution passed at the meeting. The resolution recommended that no retail chemist should be allowed to dispense morphine, chloral, or cocaine unless they were prescribed by a medical man, and that no prescription should be repeated without a written order. It is to be hoped that the Society will be successful in its efforts to combat a serious and, we fear, a growing evil.

THE EFFECTS OF CERTAIN DRUGS ON THE RENAL CIRCULATION.

DR. ALBANESE has published in an Italian journal some important researches on the effects of caffeine, chloral, and curare on the circulation in the kidney, by which he has been led to the conclusion that the amount of urine secreted is not directly proportional to the quantity of blood passing through the organ. When chloral alone was given there was a very marked increase in the volume of the kidney, though, as is well known, this drug has an exceedingly slight diuretic action; while curare, which has a marked diuretic action, was shown to cause no perceptible increase in the volume. When caffeine was introduced into an animal already under the influence of either chloral or curare, it immediately

caused a decided increase in the size of the kidney, and at the same time induced marked diuresis. Nevertheless, the increase in size produced under these conditions was not enough to account for the large quantity of urine secreted. Dr. Albanese does not agree with Schroeder that caffeine contracts the renal vessels, but finds that its action is first to increase slightly the volume of the organ and then to cause a slight dilatation of the vessels. As there appears to be no indication that the diuretic action of drugs is due to increase in circulation or in volume, he is inclined to refer it to some change effected in the renal epithelium.

TREPHINING FOR EPILEPSY.

A PAPER by Dr. Yemans in the December number of the *Occidental Medical Times* is referred to in the *Centralbl. für Chir.*, No. 14. The paper gives an account of a case of traumatic epilepsy, the fits being due to an injury to the head caused by a stone, the injury in question having been inflicted two years before the fits developed. Trephining was performed, with the result that at the time the case was reported no return of the fits had taken place. In the same paper reference is made to a case recorded by Wanzer, in which, after the operation, the attacks ceased for a time, but reappeared.

FOREIGN UNIVERSITY INTELLIGENCE.

Innsbruck.—Dr. Gabriel Anton, assistant to Professor Meynert in Vienna, is to have charge of the new clinic for mental diseases.

Königsberg.—Dr. Samter has been recognised as *privat docent* in Surgery.

Prague (Bohemian University).—Dr. Bohuslav Hellich has been recognised as *privat docent* in mental diseases.

Tomsk.—Dr. Gramatikati has been appointed Professor of Midwifery and Dr. Yerofeyeff Professor of Ophthalmology.

Vienna.—Dr. Egon Braun von Fernwald is giving the lectures in Midwifery and Gynæcology, pending the appointment of a successor to Professor Carl Braun von Fernwald, just deceased. Dr. Rosthorn has been recognised as *privat docent* in Midwifery and Gynæcology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Professor August Schenk, director of the Botanic Garden in Leipsic.—Dr. Dmitziyeff, principal medical officer of the Saratoff Hospital.

BRIGADE SURGEON VALESIUS SKIPTON GOULDSBURY, M.D., C.M.G. (formerly Administrator of the Gambia), has been appointed by Her Majesty the Queen to be Administrator of the Island of Saint Lucia and its dependencies; also to administer the Government of the Windward Islands in the event of the absence, &c., of the Governor.

THE death is announced of Sir Francis Murphy, who for fifteen years was Speaker in the Parliament of Victoria. The deceased gentleman studied medicine in Trinity College, Dublin, and became a Member of the Royal College of Surgeons of England in 1832. He received his knighthood in 1860.

THE further correspondence between Sir Andrew Clark, President of the Royal College of Physicians, the British Medical Association, and the War Office, relative to the status of medical officers of the army, has been published and laid before Parliament.

AT the annual meeting of the Birmingham General Hospital, held on March 18th last, the following resolution was moved and carried unanimously: "That in consideration of the eminent services of Sir Walter Foster, he be hereby appointed a Consulting Physician to this hospital."

IT is satisfactory to learn from the India Office that Surgeon Calvert, who accompanied the force of 200 men of the 42nd Regiment and 200 of the 44th Goorkha Light Infantry in the expedition to Manipur, is safe at Lakhipur, near Silchar.

SIR THOMAS CRAWFORD, K.C.B., M.D., late Director-General of the Army Medical Department, has been appointed a member of Lord Wantage's Committee on Recruiting.

HERR MARTENSON, Master in Pharmacy, Pharmacist to the Prince of Oldenburg's hospital, has been elected Director of the St. Petersburg Pharmaceutical Society.

PROFESSOR CORFIELD has been elected an Honorary Member of the Imperial Society of Medicine of Constantinople.

THE FACTORIES AND WORKSHOPS BILL, 1891.

THE Standing Committee on Trade had on Thursday the Factories and Workshops Bill under consideration. Mr. Matthews had charge of the Bill. The amendments to which each clause is subjected are very numerous, and the Bill is likely to undergo a rather exhaustive overhauling before it finds its way again into the House of Commons. The responsibility which the Bill of the Home Secretary attempted to saddle upon the occupier of factories and workshops has been transferred to the owner. Mr. Matthews thought that the Committee in taking this step were making the clause so elaborate as to render it impracticable. A fresh clause has been inserted providing arbitration in cases of dispute between the owner and the sanitary authority. Under the heading of special rules and requirements Mr. Sidney Buxton moved to bring workshops under the action of this Bill, a proposal which the Home Secretary was unwilling to accept. The clause (8), Mr. Matthews said, proposed "a very large experiment, to put all the factory industry of the country under the nursing care of the Secretary of State," and he maintained that if "workshops" were included "the task would be superhuman." He believed it would be mischievous, and mentioned that he would discharge his functions under this particular clause with the greatest possible caution and discrimination, and would only interfere even in the case of factories in very clear cases. Mr. Howell pointed out, however, that precautions against what was "absolutely dangerous or absolutely unhealthy" were required even more in workshops than they were in factories, and urged that every reasonable thing ought to be done to secure that end. He even suggested that so far from exempting "workshops," the Bill might be improved by exempting the factories. In its present state, as Mr. Sidney Buxton pointed out, the Bill leaves out of account all evidence which had been laid before the Sweating Commission. The question was put to a division, and it was agreed by 21 to 20 votes that "workshops" should be included in the Bill. This brings the workshops into direct connexion with the Home Office, as well as with the sanitary authority, and imposes a responsibility on the Home Secretary which he is not very willing to undertake. This clause gave rise to further debate on the proposal of Sir Henry James to provide a supply of fresh air "sufficient for ensuring the good health of the persons employed in the factory," an amendment which was met by the Secretary of State with the answer that good health could not be ensured by Act of Parliament. Mr. Matthews proposed to modify the expression by the words "sufficient to prevent injury

to the health of those employed in the workshop," which was ultimately adopted, notwithstanding that Sir Henry James characterised the proposal as "insufficient, ungrammatical, and insensible to the object we have in view." On Clause 19, which deals with the certifying factory surgeons, there are ten amendments on the paper, seven of which propose to leave the clause out altogether.

The following memorial to the Standing Committee on Trade has been forwarded by a subcommittee of the Manchester Medico-Ethical Association:—

"GENTLEMEN,—The undersigned, representing the Manchester Medico-Ethical Association, desire to present to your honourable committee a copy of resolutions passed by the Parliamentary subcommittee of that Association on March 17th, 1891, and to ask for their consideration in discussing the clauses referred to in the above Bill. 1. That in Clause 18 of the Government Bill the words, 'without a medical certificate of fitness,' be added after the word 'child.' 2. That strong opposition be offered to the abolition of the office of certifying surgeon as proposed in Clause 19 of the above Bill. 3. That all examinations for certificates of fitness be held at the works, so that the certifying surgeon shall be better able to judge of the probable effect of the work at which the child is to be employed."

The Certifying Surgeons for the Leeds district have expressed the opinion "that the physical welfare of half-time workers does not demand any alteration of existing arrangements in the way of supervision. If this supervision ceases," say they, "crooked limbs, and spinal curvature will be much more in evidence than they are at present."

MEDICAL PRACTICE IN AUSTRALIA.

MR. THOMAS J. HENRY, L.R.C.P. and F.R.C.S. Edin., medical officer, Warialda Hospital, Warialda, N.S.W., has favoured us with the following communication.

In THE LANCET of Jan. 17th, "F. O. S." asks for information regarding openings for practice in the Australian colonies. I trust you will find space for the following, derived from an experience of practice in Australia for four years. I speak more particularly of New South Wales, but my remarks will apply generally to the other colonies. In the first place, I may inform "F. O. S." that practices are bought and sold just as in England, with this difference. In England the patients of a practitioner as a rule transfer their patronage to the in-coming man; but in Australia the tie between physician and patients is very loose, and there is no certainty that patients (unless in unopposed practices, now rare) will accept the new man. In fact, doubtless from the shifting, restless character of colonial life, patients seldom remain long under one doctor, but rush from one to another to an extent unknown in the old country.

The population of New South Wales is under 1,200,000. On the list of registered practitioners in that colony, dated Dec. 31st, 1890, appear about a score less than 1000 names; and every weekly mail steamer brings new men from Great Britain, France, and Germany. It will be admitted that one practitioner to 1200 population is a good average. Moreover, in New South Wales there is no Medical Act. Any person who chooses can assume the title "M.D.," "Dr.," or "F.R.C.S." He can place it on his door-plate, and practise to his heart's content. As a result the colony is overrun with quacks. In Sydney and suburbs alone there are over 100 quacks, and a glance at the advertising pages of the Sydney evening papers shows from two to three columns daily devoted to the flaming advertisements of prosperous quacks. One of these gentry, who, however, holds the "M.D." of "the Edinburgh University of Chicago," obtained without any attendance at lectures or personal examinations, admitted to a recent Royal Commission that he had amassed over £100,000 by his practice. He had had no real medical education whatever. Several medical Bills have been introduced, but have been invariably rejected, and there seems little hope of any passing for years to come.

Both in Melbourne and Sydney are well equipped medical schools. In both the course is a five years' one after all preliminary subjects are passed. A large number of students graduate each year at these schools. The resident hospital appointments at the Melbourne Hospital are "close" to Melbourne graduates. At the Prince Alfred Hospital, Sydney, the medical superintendent and the four residents are Sydney graduates. At the Sydney Hospital all the residents except the medical superintendent (M.D. Lond.) are Australian graduates; and, though there is no written rule to that effect, it is well known that no graduate from outside Australia has much chance of election. The residents' salaries are: Melbourne and Sydney Prince Alfred Hospital, £50, with board and lodging; Sydney Hospital, £100, with ditto. Even the larger country hospitals are practically "close" to Sydney men; and at Newcastle and Bathurst (the only country hospitals which have resident medical superintendents) Sydney men are installed. The Insane Hospital appointments are also now almost invariably given to Sydney men or to native-born Australians returned from study in Britain.

I quote these instances to show how strong is the tendency to elect Australians. "Australia for the Australians" is the favourite cry. I know of several instances where in ostensibly open competitions Australians who had the Edinburgh or Irish College diplomas defeated Englishmen having M.D. of London and F.R.C.S. England. Clubs also abound. The average city rate is 15*s.* per annum, and the whole family have to be attended. In the larger cities of late the clubs have in many instances amalgamated, and pay a fixed salary to a limited number of men. The Sydney M.U. Oddfellows, numbering several thousand families, pay £250 each to four men, allowing private practice. For these posts competition is keen, and from twenty to thirty men apply for one vacancy. In the outlying districts the hospitals give a salary of £100 to £150 to a practitioner, allowing him private practice. My appointment is £150. For it there were seventeen candidates. I am a native of Australia, and that fact undoubtedly assisted my election. I am eighty miles from a railway station by a bad road, and 139 by a fair road. I often have to ride from forty to sixty miles to a case. The nearest village is thirty miles, and in some directions there are none for sixty miles. The average income of a country practitioner (and no village of over 300 population is without at least one) may be set down as from £500 to £900. A few in the larger towns make £1500, but in the smaller few make over £700, and some as low as £250. The current cost of living is slightly more than in England, whilst rent and furniture are much more expensive. In the country one must keep several horses. I have to keep four in order to have a reserve for emergencies, and I take two on all long journeys—i e, over twenty-five miles one way. A practitioner with capital can of course always buy a practice. The price is about one-half that which would be asked in England. In Sydney and Melbourne provident dispensaries from 2*s* 6*d*. to 1*s*. abound. There are generally openings for young men to travel with insurance agents, and thus see the country. But in applying for appointments it is not thought to be a recommendation to have been "an insurance doctor," as the lazy itinerant life and living in bush public-houses is not conducive to professional perfection or personal dignity, albeit many able and excellent men have travelled for a few months on their arrival. Victoria or South New South Wales would probably suit a case of winter cough best. The northern colonies are too hot in summer.

THE GENERAL PRACTITIONERS' UNION.

AT a meeting of the Committee on Hospital Management held on Monday evening last it was resolved to send a circular to the general practitioners residing in the metropolitan district, inviting replies to the following questions:—1. Is it within your knowledge that hospitals and public dispensaries are abused? State particulars as to cases. No need to disclose names and addresses of patients. 2. Do you know of any cases where the spread of infectious or contagious diseases can be traced to the out-patient departments of hospitals or public dispensaries? 3. Is it not your opinion that the special departments of the general hospitals should be so extended and supported

as to render *special* hospitals unnecessary? 4. Do you consider any kind of special hospital desirable? If so, which? 5. Do you approve of the paying or part paying system in the general and special hospitals or public dispensaries? If you do, or if you do not, state your reasons. 6. Do you approve of a central board to supervise the existing charities and the licensing of new ones? 7. Is it not your opinion that public hospitals and dispensaries should have the power to recover all expenses incurred for treatment of patients who have obtained admission to hospitals under false pretences? 8. Do you think that the number of out-patients seen per day should be limited? 9. What further check would you impose upon the admission of out- and casualty patients? 10. Is it your opinion that the larger field which exists in the Poor-law infirmaries and dispensaries for the instruction of medical students should be utilised for their curriculum, more especially during the fifth year of study?

The committee will feel obliged if any medical man in a position to furnish information respecting the above will communicate with the hon. sec., 29, Threadneedle-street, E.C.

COLONIAL MEDICAL APPOINTMENTS.

THOUGH complaints are frequently published in the columns of THE LANCET of the grievances of colonial surgeons, there always seems to be a sufficient supply of candidates for the comparatively small number of such appointments as happen to be vacant. April is the month in which the list of applicants is drawn up for the ensuing twelve months; it will therefore be opportune to reproduce the information on the subject which we have received from the Colonial Office. It varies in some respects from previous circulars of a similar nature.

Medical appointments are from time to time filled up by the Colonial Office in the following colonies:—British Guiana, Jamaica, Trinidad, Windward Islands, Leeward Islands, British Honduras, Fiji, Sierra Leone, Gambia, Gold Coast, Lagos, Ceylon, Straits Settlements, Hong Kong, Cyprus, Gibraltar, St. Helena, and the Falkland Islands. In Ceylon and Jamaica vacancies are almost always filled locally by the appointment of qualified native candidates. It is for the West Indies and the West African Colonies that medical officers are chiefly required. The majority of the West Indian appointments involve medical charge of a district, including as a rule the care of a hospital, poor-house, asylum, or other institution, and free attendance on the aged and children.

It should be noted that passage money on first appointment, and leave of absence on half-pay (in case of sickness, or after six years' service, if the medical officer has given satisfaction in the discharge of his duties), are granted to medical officers under the Colonial Regulations; and those serving in West Africa are allowed six months' leave, with full pay and free passages home and out again, after every twelve or fifteen months of continuous residential service. With regard to pension, medical officers are usually on the same footing as other Government servants; but in cases where private practice is allowed, the rule is that they are not entitled to pension, except in West Africa.

The following is a short account of the appointments in the separate colonies:—

British Guiana.—Candidates must have held for at least six months a resident medical appointment in some public institution. Salary £300 to £900 per annum.

Jamaica.—The appointments, forty-nine in number, are mainly district appointments, with private practice allowed; the salary paid by Government varies from £150 to £250 per annum, and in most cases is £200.

Trinidad and Tobago.—In Trinidad there are twenty-nine appointments. Officers are appointed in the first instance on two years' probation as supernumeraries. They receive a salary at the rate of £300 per annum, with furnished quarters, and are usually attached to the Government Hospital; the salary assigned to the district appointments is £300, which is increased to £400 and upwards by various allowances for horse, house, or otherwise; these posts carry the right to private practice; after every ten years' service an officer is given an additional personal allowance at the rate of £100 per annum. In the island of Tobago there are three distinct appointments with a salary of £150 per annum attached.

Windward Islands.—The salaries paid by Government vary from £200 to £400.

Leeward Islands (Antigua, St. Christopher and Nevis, Dominica, Montserrat, Virgin Islands).—The twenty-two appointments are of the same nature as in the Windward Islands; the salaries vary from £150 to £400 per annum, but in most cases the pay is £250. As a rule, £30 only is allowed for passage money. The medical officers are allowed private practice.

British Honduras.—There are five medical appointments, in all of which private practice is allowed; the pay is respectively $300, $1000 (three), and $2250.

Fiji.—There are at present eight medical officers, of whom the senior medical officer receives £600 per annum, the others receiving £300 per annum and £50 for house allowance, with private practice.

Sierra Leone.—There are three Government medical officers, who are all allowed to take private practice. The pay of the colonial surgeon is £500 a year. One assistant colonial surgeon receives £300, and the other £250.

Gambia.—There are two medical officers, paid respectively £400 and £300 per annum, and allowed private practice. Quarters are not provided.

Gold Coast.—The pay of the colonial surgeon is £800, rising to £1000 by £50 per annum, with consultation practice only. The assistant colonial surgeons (thirteen in number) are paid at the rate of £350 per annum, rising by triennial increments of £25 to £400. Private practice is allowed, but there is very little to be had, and it cannot be counted upon, as the medical officers are liable to frequent change of station. Free quarters are provided.

Lagos.—The pay of the colonial surgeon is £500 per annum, and he also receives £100 as health officer. The senior assistant colonial surgeon receives the same salary as the assistants at the Gold Coast. There are two other assistant colonial surgeons at £250, rising by triennial increments of £25 to £300 per annum. Private practice is allowed in all cases. Free quarters, or allowances in lieu thereof, are granted to the colonial surgeon and the senior assistant.

N.B.—The special rules as to leave and pension in the case of Government servants on the West Coast of Africa apply also to medical officers.

Ceylon.—Salary from 1500 Rs. to 8000 Rs.

Straits Settlements.—Salary varies from $2400 to $6000 per annum.

Hong Kong.—Salary $1800 to $4800.

Gibraltar.—Salary from about £60 to £1000.

Cyprus.—There is a chief medical officer, paid at the rate of £500 per annum, and two district medical officers, paid at the rate of £250 per annum; all enjoying private practice: these are the only medical appointments in the island which are open to English candidates.

St. Helena.—The colonial surgeon receives £300 per annum, and £30 horse allowance. Private practice is allowed.

Falkland Islands.—There are two appointments, one of which is paid at the rate of £300 per annum, and the other at the rate of £200 per annum. Private practice is allowed in both cases.

In addition to the ordinary medical appointments in these colonies vacancies also occasionally, though very rarely, occur for which specialists are required—as, e.g., to take charge of a lunatic asylum; and the particulars of chief medical officer in some of the larger colonies have not been given, as the headship of the medical department in such colonies, requiring administrative as well as professional qualifications, is not reserved to the ordinary medical staff, but is often filled up directly from the outside.

All applicants for medical employment in the colonies must be between the ages of twenty-three and thirty, and must be doubly qualified; preference will be given to those who have held hospital appointments as house physicians and house surgeons. Certificates of moral character and of sobriety will be required, and every officer before being appointed will be medically examined by one of the consulting physicians of the Colonial Office, Dr. Gage Brown, 88, Sloane-street, London, S.W.; Sir D. S. Maclagan, 28, Heriot-row, Edinburgh; and Dr. Hawtrey Benson, 57, Fitzwilliam-square, Dublin.

Applications for medical employment in the tropical colonies from persons in the United Kingdom must be addressed to the Private Secretary, Colonial Office, Downing-street, S.W., during the month of April in each year, and notices to that effect will be posted up early in the year in the leading hospitals and medical schools of Great Britain and Ireland. Out of the total number so applying, a list of candidates will be made who will be eligible to fill any vacancies which may occur during the year, but no promise whatever can be held out that candidates will eventually receive an appointment. It is not possible to forecast either the number or the nature of the vacancies which will arise in the course of any given year.

In the course of the year 1889–1890 there were twelve vacancies, and in the following colonies:—British Guiana, Fiji, Gibraltar, Gold Coast, Hong Kong, Lagos, St. Helena. There were about fifty candidates. In the course of the year 1890-1891 there were seventeen vacancies to which appointments were made from this country. They occurred in the following Colonies:—British Guiana, British Honduras, Gambia, Gold Coast, Leeward Islands, Straits Settlements, Windward Islands. The list of eligible candidates applying in April, 1890, contained between fifty and sixty names.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Kettering Rural District.—Mr. J. W. Dryland reports a maintained and severe epidemic of enteric fever at Desborough, which caused seventeen deaths, and materially added to the zymotic death-rate of the district. Five other deaths from the same cause occurred elsewhere in the rural district. As regards Desborough there were 144 attacks, and it seems as if the disease, once imported, had been spread by reason of blocked sewers and faulty drains, these reacting in their turn on certain wells, some of which have been closed. Flushing action was impeded towards the close of the year by reason of the severe frosts, but a loan is now to be secured for amending the sewers. Several other villages were likewise affected, and some of them do not appear for the first time in connexion with occurrences of this disease, the causation of which in this district calls for very exhaustive investigation. Mr. Dryland, acting on his recent experience, takes occasion again to urge very strongly the provision of an isolation hospital.

Caxton and St. Neots Districts.—Mr. T. Poyntz Wright continues to maintain an active supervision over the sanitary circumstances of the three districts involved in this area, and, as on former occasions, he does not hesitate to point out the conditions that involve risk to public health, although the death-rate in two of the districts, at least, remains extremely low. Dealing with the causation of epidemic diseases, Mr. Wright states that in his district diphtheria has generally followed on a rise in the subsoil water. His reference elsewhere to the defective quality of shallow well water would seem to imply that the soil is polluted, and hence a rise of subsoil water may act by the expulsion of a sewage contaminated air from the soil into the atmosphere above, the changing level of subsoil water thus becoming a factor in the production of diphtheria much in the fashion indicated recently in our abstracts of the Milroy lectures on this subject. The large amount of infectious disease which is brought to light by the Notification Act leads to a renewal of advice as to the provision of means of isolation. Now, more than ever, has it become possible by prompt isolation of first attacks to stay the prevalence of infectious disease, hence the especial value of the advice given in this respect.

Uxbridge Rural District.—Mr. Charles Roberts estimates the death-rate for this district during 1890 as 17·5 per 1000. The diphtheria which was so seriously prevalent gives distinct signs of abatement, the mortality being one-third only of that for last year. But still, 11 deaths from diphtheria, with 6 from membranous croup, together with the amount of non-fatal throat mischief which these 17 deaths denote, should lead to very careful precautions as autumn advances, especially in the exclusion of sore-throat attacks from elementary schools; and no amount of work effected in improving drains, sewers, &c., should be allowed to interfere with such supervision of school attendances. Valuable as it is to deal with bell-traps &c, there is the still graver consideration attaching to aggregation of children at susceptible ages, and the risk of throat infection acquiring, under such circumstances, a virulence that it would be difficult to control.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 6231 births and 4304 deaths were registered during the week ending April 4th. The annual rate of mortality in these towns, which had declined from 24·1 to 21·2 per 1000 in the preceding five weeks, rose again to 22·4 last week. The rate was 20·9 in London and 23·7 in the twenty-seven provincial towns. During the thirteen weeks of the quarter ending on the 4th inst. the death-rate in the twenty-eight towns averaged 23·0 per 1000, and slightly exceeded the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 14·1 in Derby, 14·5 in Brighton, 17·6 in Nottingham, and 18·1 in Birmingham; the highest rates were 30·2 in Halifax, 30·6 in Portsmouth, 31·6 in Plymouth, and 36·5 in Hull. The deaths referred to the principal zymotic diseases, which had been 449 and 414 in the preceding two weeks, rose again last week to 468; they included 184 from measles, 149 from whooping-cough, 35 from scarlet fever, 34 from diarrhœa, 33 from diphtheria, 30 from "fever" (principally enteric), and 3 from small-pox. These diseases caused the lowest death-rates in Norwich, Brighton, and Oldham, and the highest rates in Huddersfield, Blackburn, and Portsmouth. The greatest mortality from measles occurred in Leeds, Bristol, Huddersfield, Blackburn, and Portsmouth; from scarlet fever in Bradford, Bolton, and Halifax; from whooping-cough in Halifax, Newcastle-upon-Tyne, Plymouth, Salford, and Leicester; and from "fever" in Wolverhampton. The 33 deaths from diphtheria included 24 in London. Two fatal cases of small-pox were recorded last week in London, and 1 in Hull; 7 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and 2 in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1026, and showed a further decline from recent weekly numbers; the patients admitted during the week were 98, against 91 and 81 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding five weeks from 685 to 466, rose to 489 last week, and exceeded by 12 the corrected average. The causes of 97, or 2·3 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Plymouth, Wolverhampton, Bolton, Bradford, and Cardiff; the largest proportions of uncertified deaths were recorded in Sheffield, Preston, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 25·9 and 26·7 per 1000 in the preceding two weeks, declined to 26·2 during the week ending April 4th, but exceeded by 3·8 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 14·5 in Aberdeen and 16·7 in Leith to 30·1 in Glasgow and 44·4 in Paisley. The 684 deaths in these eight towns showed a decline of 14 from the number in the preceding week, and included 41 which were referred to measles, 28 to whooping-cough, 14 to diarrhœa, 9 to diphtheria, 5 to scarlet fever, 3 to "fever," and not one to small-pox. In all, 100 deaths resulted from these principal zymotic diseases, against 73 and 93 in the preceding two weeks. These 100 deaths were equal to an annual rate of 3·8 per 1000, which exceeded by 1·4 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had increased in the preceding four weeks from 16 to 36, further rose last week to 41, of which 20 occurred in Paisley and 18 in Glasgow. The deaths referred to whooping-cough, which had risen from 31 to 34 in the previous three weeks, declined to 28 last week, and included 10 in Edinburgh, 8 in Glasgow, and 5 in Dundee. The 9 fatal cases of diphtheria showed a further increase upon recent weekly numbers; 2 occurred in Glasgow, 2 in Dundee, and 2 in Paisley. The 5 deaths from scarlet fever were within 2 of the number in the preceding week, and included 4 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had declined from 201 to 169 in the preceding three weeks, were 166 last week, and exceeded by 36 the number in the corresponding week of last year. The causes of 64, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 28·1 to 29·1 per 1000 in the preceding three weeks, declined to 23·9 during the week ending April 4th. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 30·2 per 1000, the rate for the same period being 22·6 in London and 21·8 in Edinburgh. The 162 deaths in Dublin showed a decline of 35 from the number in the preceding week, and included 3 which were referred to whooping-cough, 1 to "fever," 1 to diarrhœa, but not one either to small-pox, measles, scarlet fever, or diphtheria. Thus the deaths referred to the principal zymotic diseases, which had been 11 and 8 in the preceding two weeks, further declined last week to 5; they were equal to an annual rate of 0·7 per 1000, the rate from the same diseases being 1·9 in London and 2·8 in Edinburgh. The fatal cases of whooping-cough, which had been 5 and 3 in the preceding two weeks, were again 3 last week. The deaths referred to "fever," which had been 4 and 3 in the previous two weeks, further declined to 1 during the week under notice. The 162 deaths in Dublin included 28 of infants under one year of age and 48 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in recent weeks. Eight inquest cases and 4 deaths from violence were registered; and 57, or more than a third, of the deaths occurred in public institutions. The causes of 18, or more than 11 per cent., of the deaths in the city were not certified.

THE SERVICES.

Surgeon N. Mookerjee, of the 4th Burmah Infantry, will accompany the Manipur Relief Column, which is to start from Tamu.

ARMY MEDICAL STAFF.—The following Surgeons-Major of the Medical Staff who have ranked as Majors will henceforward become entitled to rank as Lieutenant-Colonels:—L. A. Irving, J. A. M'Cracken, M.D., J. M. Beamish, M.D.,

J. A. Clery, M.B., J. Coats, M.B., J. G. Williamson, W. J. Fawcett, M.B., H. W. Joynt, W. E. Saunders, D. Leckie, M.B., W. J. Charlton, A. H. Anthonisz, M.B., O. F. Molloy, R. Exham, J. M'Namara, M.D., R. Harman, M.B., G. D. N. Leake, J. W. O'M. Martin, M.B., P. R. Gabbett, M. D. O'Connell, M.D., W. Finlay, and E. H. Joynt, M.D. Surgeon J. F. Bateson, M.B., has been selected to be attached to the Coldstream Guards for his tour of home service, vice Surgeon R. H. Cox, who has resigned his commission.

NAVAL MEDICAL SERVICE. — The following appointments have been made at the Admiralty:—Inspector-General of Hospitals Edward T. Mortimer to Plymouth Hospital (dated May 7th, 1891; Deputy Inspectors-General Maxwell Rogers, M.D., to Malta Hospital, and Duncan Hilston, M.D., to Haslar Hospital (both dated April 4th, 1891). Surgeons Alexander George Pemberton Gipps, John Hunter, M.B, Robert McIvor, M.D., and Wm. George Jack have been promoted to the rank of Staff Surgeon in Her Majesty's Fleet. Staff Surgeons: Wm. H. Patterson to the *Aurora*, and Alexander G. P. Gipps to the *Boscawen* (both dated April 13th, 1891). Surgeons: George Allen, M.B., to the *Lizard* (dated April 1st, 1891); John E. Webb to Haslar Hospital (dated March 1st, 1891); George L. Baker to the *Racer*, and Edwd. R. D. Fasken to the *Lion* (dated April 21st, 1891); James J. Walsh to Chatham Hospital, and Wm. G. Axford to Bermuda Hospital (dated April 7th, 1891).

VOLUNTEER CORPS.—*Artillery:* 3rd Durham (Western Division, Royal Artillery): Francis Wm. Sinclair, M.B., to be Acting Surgeon (dated April 4th, 1891). — *Rifle:* 3rd (Cambridgeshire) Volunteer Battalion, the Suffolk Regiment: Acting Surgeon F. P. F. Ransom, M.D., to be Surgeon (dated April 4th, 1891).—5th (Deeside Highland) Volunteer Battalion, the Gordon Highlanders: Robert Rannie, M.B., to be Acting Surgeon (dated April 4th, 1891).

Correspondence.

"Audi alteram partem."

THE COMMUNICABILITY OF CHOLERA.

To the Editors of THE LANCET.

SIRS,—In your notice of the proceedings of the Epidemiological Society in THE LANCET of this date it is reported that "though asserting his disbelief in the communicability of cholera by *human agency* or *material* means, Sir Joseph Fayrer urged bacteriologists to pursue their investigations in the calm, temperate, and judicial spirit shown by the lecturer. He differed from many of their conclusions, although unacquainted [it should be *practically* unacquainted] with their methods, but provided they did not ignore other causes of disease their labours could not fail to lead us nearer to the truth." The reporter has, I fear, misunderstood, and therefore unintentionally misrepresented, me. I certainly did say that I have not yet been satisfied that cholera is communicable by direct contagion, by a germ from one individual to the other, but I did not say that it is altogether independent of human agency or material means. Knowing as I well do that local insanitary conditions, impure water, foul air, certain climatic conditions, together with overcrowding human beings, are potent factors in the development of the disease, I yield to no one in my admiration of the work and discoveries of bacteriologists; but I venture to think there is a disposition to too hasty generalisation, and, in the zeal and enthusiasm of scientific investigation, too great a tendency to describe as causes what may be but epiphenomena, too little recognition of the many other possible causes of disease which lie within and around us. I venture, in short, to think that though we are well acquainted with the *nurses*, we as yet do not know the *mother* of cholera. I am, Sirs, yours faithfully,

April 4th, 1891. J. FAYRER.

THE PULSE IN ANGINA PECTORIS.

To the Editors of THE LANCET.

SIRS,—Through mischance I did not see Dr. Gairdner's letter in THE LANCET of March 28th on the subject of the pulse in angina pectoris; may I now be permitted a few words in reply? The quotation which Dr. Gairdner cites must, I confess, be taken as the expression of a doubt that the pulse may be unaltered during an attack of angina, though surely the quotation from Heberden given in the foot-note justifies an interpretation different from that which Dr. Gairdner gives. The ground, however, upon which I stated that Dr. Gairdner *definitely accepted* the statement that the pulse might be unaffected during an attack of angina pectoris is the presence, on p. 541, vol. iv., Reynolds' "System of Medicine," of the following paragraph: "On the other hand, it must be admitted that in a few instances the heart has been heard beating in the very midst of a paroxysm, without appreciable alteration in the character of the sounds and impulse, and the pulse has also been said to be regular, and neither rapid nor weak." This definite statement will perhaps justify my use of Dr. Gairdner's name, though I must confess that had I been fully alive to the doubts expressed elsewhere in the article referred to I should not have quoted Dr. Gairdner in the sense I did.

May I add that the real object of my letter of March 21st was to draw attention to a definite statement, backed by authoritative names, and to point to the conclusion which the acceptance of such statement would compel—viz., that in *some cases at least* the seizure of angina pectoris is independent of any heart failure. Of course, after Dr. Gairdner's letter the above statement no longer has his sanction.

I am, Sirs, yours faithfully,

Welbeck-st., W., April 6th, 1891. HARRINGTON SAINSBURY.

THE TREATMENT OF CHRONIC INFLAMMATORY DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—I think Dr. Herman is mistaken when he says my proposed challenge would not further our knowledge as to whether the majority or minority of inflammatory lumps in the pelvis tend to spontaneous cure or not. But that is not what I proposed to discuss. What I did propose to investigate—and I am positive I could settle it definitely in the way I suggest—is the preliminary question, whether Dr. Herman and his school are speaking of the same thing that I am when the phrase "chronic inflammatory disease of the uterine appendages" is used. It must be evident to all your readers that we are not, and I could prove to Dr. Herman that he includes a great group of cases of mere subinvolution and hyperæmia which we exclude. But he declines to accept my proposal, and so he must remain in the realms of darkness. He is good enough to say I might serve medical science by publishing more detailed and exact reports of my own cases. Dr. Herman's memory in my case must be as strangely defective as it was shown to be in the case of Dr. Braithwaite, or he must confine his reading to the Transactions of the Obstetrical Society, in the ranks of which he is a distinguished leader. But what is the use of our making appearances at the Obstetrical Society? Dr. Braithwaite's paper was refused, and several of mine have been refused. A few nights ago Dr. Grigg attended with the preparations of three cases of recent occurrence, and he gave full details of their clinical histories. I was prepared to substantiate his statements and to elaborate the details of the operations with which he had entrusted me, but there was a "conspiracy of silence," and the very men who are ever ready enough to abuse us and to misrepresent our work when we are not present, were as dumb as mice when we had them face to face.

I am, Sirs, yours truly,

April 6th, 1891. LAWSON TAIT.

*** We cannot devote more space to this controversy.—ED. L.

EMOTIONAL EXPRESSION.

To the Editors of THE LANCET.

SIRS,—In your last issue you deal with emotional expression, and point to the theories advanced by Darwin relating thereto. I certainly agree with you in admitting that to a certain extent many things which up to late years have been allowed to rest as natural, may be and are becoming daily more satisfactorily explained. Now we know that blushing may be caused by division of the cervical sympathetics due to dilatation of the arteries of the head and neck, and consequent increased flow of blood

to these parts, while the reverse obtains should the upper ends of the divided nerves be stimulated by electricity. Therefore we say that through the cervical sympathetics is exercised an inhibitory action (the centre for which is situated in the medulla) over the arteries of the head and neck, which keeps them in a state of tonic contraction. On the removal of this inhibitory action, or, as Foster has it, "diminution of the normal tonic action of the [medullary] centre," dilatation occurs; while, on the other hand, stimulation of the centre causes "increase of the same normal tonic action of the centre," and pallor without any lessening of the heart's action results. Analogous with the above may be mentioned lacrymation and salivation, the latter due to increased vascularity of the salivary glands—in the case of the submaxillary the stimulus passing down the chorda tympani. Laughter we may take, I think, as an exaggerated form of smiling, *plus* a series of vocal sounds. If we accept the above explanation as regards blushing and crying, may we not also assume that the human face preserves its normal expression owing to certain nerve influences, more or less subservient to the will according as its possessor can command it? Remove this so to speak inhibitory action, and the face loses its natural expression and firmness of outline and comes to wear a peculiar vacant, almost meaningless, look—a smile. This smile or vacant look is that of an idiot, and as such the perpetual wearer of it would I think be classed. This is partly borne out by the knowledge of the fact that the face is a very fair picture of the mind of its owner, and that a man of strong will may restrain from laughter if he chooses, whereas the weaker the will the less able is he to govern his actions. The case of the crying child tightly shutting its eyes, is not this an exaggerated form of the wrinkling?

Regarding the cause: these acts are acknowledged to be governed by centres situated in the medulla, and probably the immediate exciting cause is the disturbance of the equilibrium normally existing there. Such may be caused by various agents apparently—e.g., lacrymation by emotion, or external stimuli, as touching the eyeball, the vapour of onions, &c.; salivation by action of certain drugs, such as calomel, or through the agency of the nervous system, as is produced by the smell or sight of food. Again, we know that all these phenomena are much more prone to occur in persons of feeble intellect, as, for example, the hysterical.

Darwin's theory, to which you lastly draw attention—viz., that "when the sensorium is strongly excited, nerve force is generated in excess, and transmitted in certain definite directions,"—appears to be the soundest explanation as yet volunteered. Doubtless, when this excess of nerve force is generated it must, as you say, "find vent in some outward and physical manifestation," and impulses travel and attack those parts of the human organisation which are in a more or less weaker state than others, and therefore less able to resist. This will perhaps account for the same effect being produced by different emotions, such as crying from either grief or joy. The subject is, indeed, one which opens a vast field of inquiry, and it will be interesting to hear the views of some of your readers better acquainted therewith.

I am, Sirs, yours faithfully,

Southwark, March 17th, 1891. SIDNEY E. ATKINS.

PUBLIC HEALTH (LONDON) LAW AMENDMENT ACT.

To the Editors of THE LANCET.

SIRS,—Permit me to draw your attention to Clause 35 (1) of the above Act, which runs thus: "The power to appoint the medical officer of a union to be a medical officer of health is hereby repealed." On what ground is the district medical officer singled out to be debarred by law from pursuing that branch of his profession for which his public position particularly fits him? It should be remembered that a great proportion of the profession either are, have been, or will be medical officers of a union, and I would venture to submit that such officers may justly ask the entire profession, including the heads of colleges from which they have obtained the legal right to practise all branches of their profession, to assist them in their, I trust united, endeavour to prevent an act of such gross injustice as well as to resent such a gratuitous and unwarrantable insult.

I am, Sirs, yours truly,

April 8th, 1891. FAIRPLAY.

THE TWENTIETH SURGICAL CONGRESS, HELD AT BERLIN.

(FROM OUR OWN CORRESPONDENT.)

AT noon on the 1st inst. Professor Thiersch opened the Surgical Congress in the festal hall of Berlin University. Besides the Berlin surgeons and Professors Koch, Koenig of Göttingen, Esmarch of Kiel, Bruns of Tübingen, Kuester of Marburg, Wagner of Kœnigshuette, Mikulicz of Breslau, Lauenstein of Hamburg, and Roth of Dresden were present, and the attendance was very numerous. The President referred to the members who had died since the last meeting, the most famous of whom were Nussbaum of Munich and Reyher of Dorpat. The committee was re-elected by acclamation, and Prof. Bergmann was elected president, who reported on the Langenbeck House, an institution to be established in memory of the great surgeon whose name it is to bear.

After some preliminary business, the President addressed the assembly on the subject of Koch's method. The gist of his remarks was as follows. Local reaction takes place only in real tuberculosis, whereas general reaction has been observed in other diseases—for instance, actinomycosis and *softened* large sarcomas. In the latter cases, indeed, it is likely that the patients suffer from tubercular affections too, and this question ought to be decided by post-mortem examination. The unfavourable effects of tuberculin must be judged of with great caution. General tuberculosis sometimes sets in after extensive surgical operations in cases of local tuberculosis, and the occurrence of miliary tuberculosis after the application of tuberculin is perhaps to be compared with such cases and explained in the same manner. It is at any rate necessary, before attributing the outbreak of general tuberculosis to the injections, to ascertain that the fever caused by the latter did not decrease till the termination, and that the necropsy proved the existence of a single focus, from which the bacilli spread. One must also prove that the spreading of the bacilli is fresh, which is no easy matter. He had observed that in many cases, after apparent cure, new tubercular ulcers and nodes appear at places where they did not exist before. One may say that latent tubercular nodules had already existed there which now became apparent. But the outbreak sometimes occurs so long after the treatment (from six to ten weeks) that this explanation presents difficulties. It is still more unfortunate that such new nodes and ulcers resist Koch's treatment, whereas it might be thought that they, if any, should yield to it, because tuberculin is said to be more efficacious in the early stages of tuberculosis. These incidents at least prove that Koch's method does not protect against relapses, and this concurrence of fairly regular initial efficacy, with frequent relapse, is one of the most unfavourable features in the matter. Should the question be raised whether we ought to abandon the remedy or alter its application, in order to discover whether the initial successes can be made permanent, it must be said that the former course would be premature; considering the shortness of the time over which our experience extends, the latter course should be adopted. At any rate, science will gain richly by these experiments; just as in the story of the treasure-seekers in the vineyard, the fertility of the vineyard was increased by their efforts to find gold. Dr. Koenig of Göttingen spoke more hopefully. He now injected tuberculin in small doses, beginning with half a milligramme, and had more cases of improvement than before. Some patients ought not to be subjected to the treatment at all, especially those suffering from multiple tubercular disease, and those with undiagnosed large foci in joints. Many other cases showed improvement at first, then became stationary, while in others the effect was excellent. To the latter category belonged, above all, lupus of the oral cavity, in the treatment of which tuberculin had already become indispensable. In agreement with Bergmann, Koenig declared the favourable effect to be a consequence, not of necrosis, but of the flushing of the diseased parts with exuded fluids, the anti-bacterial serum and white blood-corpuscles of which have a therapeutic effect. At any rate, there were no other means by which similar phenomena could be produced, and therefore the experiments should be continued. Thiersch confirmed Koenig's remarks on lupus of the oral cavity. Schede of Hamburg declared tuberculin to be an invaluable weapon against

tuberculosis. He had not observed bad effects of a serious nature. He believed the variations of effect to be due to differences in the use of the remedy. He had never seen cases of miliary tuberculosis that could be with certainty attributed to the administration of tuberculin. The foci that came to light after the injections were always old; they showed caseous contents, and had therefore existed for a length of time, and only been developed by the treatment. He used very small doses, and sought to measure them so as to avoid fever and to render a rapid increase of the doses possible. He regarded careful tendance, good nourishment, and plenty of fresh air as very important auxiliaries. Lauenstein of Hamburg spoke in similar terms. Eiselsberg of Vienna reported on a case of actinomycotic tumour in Billroth's clinic that had been cured by tuberculin; and Kuester of Marburg on two cases of non-tubercular tumours in which local reaction had taken place. The discussion was then closed.

Senger of Krefeld then spoke on the efficacy of iodoform injections in surgical tuberculosis. He believes that he has discovered the reason why the treatment of articular tuberculosis with iodoform is sometimes successful and sometimes not. It is not the iodoform itself, he thinks, which causes the cure, but the formic acid produced by its oxidation. If oxidation take place iodoform acts, but not otherwise. On the strength of this theory he has injected formate of soda and formic sulphuric ether with good effect. The last speaker was Dr. Rubenstein, who communicated the results obtained by Professor Schueller of Berlin in more than one hundred cases of local tuberculosis of the skin, the glands, the bones, and the joints by a combination of internal treatment with guaiacum, partly with surgical treatment, partly (in tuberculosis of the joints) with injections of iodoform glycerine into the joints and directly into the tubercular soft parts and bones belonging to the joints. Of fifteen cases of articular tuberculosis treated in this manner nine are already permanently cured. As regards the other forms of local tuberculosis Schueller's results are of special importance, because in many cases of cure there has been no relapse, though years have passed since the close of the treatment. Some cases have been observed for more than eight years.

The second sitting began with a discussion between Liebreich and Bergmann. In his speech on Koch's method Bergmann had mentioned Liebreich's cantharidinate of potash, and had stated that in several cases of lupus treated with it in his clinic no result had been obtained. Liebreich now maintained that there was improvement in these and other cases—slow indeed, but distinct. Bergmann declared the supposed improvement to be nothing more than an erroneous interpretation of the continual changes characteristic of all cases of lupus. Liebreich expressed the hope that it would soon be possible to prove the unquestionable improvement more convincingly. Koenig then spoke on the osteo-plastic treatment of congenital dislocation of the hip-joint. He had tried to obtain a permanent cure by splitting off a plate of bone from the pelvis and forming an artificial socket to hold the condyle firmly. He could not report definitely on the result, mainly because two of the children first operated on had died of infectious diseases. Schuchardt of Stettin then reported a case of extirpation of a tubercular kidney, and several cases in which lupus had at first been supposed to be cured and had afterwards reappeared were shown. Urban of Leipsic, on the other hand, showed a case of extensive lupus of the left temple, cheek, and neck, which had been completely cured by extirpation, followed by transplantation of healthy skin. With reference to this case Thiersch remarked that the transplanted layers of skin grow the more easily the thinner they are, but the appearance of the cicatrix is proportionately less good. In young adults, however, engrafted skin shares in their growth and becomes thicker, so that in such cases the use of thin layers is permissible even from the æsthetic point of view. Patients in whom Koch's method had been combined with surgical treatment were then shown. Though it cannot be said that they are completely cured, their general condition is so much improved that a gradual, complete, and permanent cure may be expected. According to Hahn, who had operated on one of these patients, a very careful selection of cases is the first condition of success, and suitable cases are not numerous. Westphal of Berlin then reported three cases of articular tuberculosis, which had been successfully treated by Koch's method. Bruns of Tübingen then spoke on cirsoid neuromas and aneurysms. Army Surgeon Dr. Benda showed a case of traumatic cortex-epilepsy, which had been cured after extensive osteo-plastic trepanning and the removal of a piece of the cerebral cortex.

The third meeting began with a discourse by Herzog of Munich on the involution of the umbilical vessels. He regards the process not as a retraction of the distended tissues, but as a partial decay of them, and believes that thrombosis does not play so definite a part in the final closing of the vessels as has hitherto been ascribed to it, and that, on the contrary, it may, under certain circumstances, delay involution. Professor Gurlt then reported the result of a proposal made last year that the members of the Congress should send in statements of the number of anæsthetisations undertaken by them, and of the untoward accidents observed by them on those occasions. Sixty-six reports, mostly from Germany, and mostly confined to a part of last year, had been received. Unfortunately six German clinics and several great hospitals had not yet reported. The Berlin Charité, on the other hand, had reported on a period of twelve years, and the dentist Ritter of Berlin on 1748 cases. Deducting the Charité cases, the number of which was roughly estimated at 12,000, 24,675 cases of anæsthetisation had been reported, 22,656 with chloroform, 470 with ether, 1055 with ether *plus* chloroform, 470 with ether *plus* chloroform *plus* alcohol, and 27 with bromide of ethyl. Among the chloroform cases 71 cases of threatened asphyxia and 6 deaths occurred; among the ether cases, none even of danger; among the ether-chloroform cases, 5 of danger; among the ether-chloroform-alcohol cases, 4 of danger; among the bromide of ethyl cases, none. The chloroform used was obtained mostly from German and English chloral factories. Of 2732 narcoses, 278 lasted an hour or more. The three longest lasted 150, 155, and 180 minutes. The average consumption of chloroform with the ordinary mask was one gramme per minute: with the Junker-Kappler mask 0·6 of a gramme. One private clinic reckoned the average consumption at twenty-five grammes per case; the maximum consumption was 180 grammes. Some of the reporters increased the narcosis by injecting morphia. The threatening of asphyxia occurred in patients of all ages and degrees of strength. Professor Bruns remarked that the results were not unsatisfactory, but that better ones seemed not impossible. Greater attention, especially, should be paid to ether narcosis. The materials, too, were not copious enough to admit of safe conclusions. A proposal to continue the inquiry was accepted.

Berlin, April 7th.

THE SUN-BATH OF THE SAHARA.

(FROM A HOLIDAY CONTRIBUTOR.)

NEVER within the experience of the oldest hotel-keeper between Tunis and Constantine, or Constantine and Biskra, has there been such an inroad of arrivals as during the winter now closing. The abnormal cold, which, south of the Algerian littoral, drove the Bouira lion from his den and made the panther a too familiar object near Bône, had emptied the winter cities of Spain and the suntraps of Italy, and even thinned the *aprici advenæ* of the French Riviera—sending all flying southward in quest of sun. The favourite terminus of these pilgrims was Biskra, and its hotel accommodation, after being strained to bursting, had to be supplemented by improvised lodgings in the town. Nor was it the hotel service only that proved inadequate to the demand. The railway arrangements, wretched at all times, broke down—at least to this extent, that first-class passengers had to be thrust into second-class and even third-class carriages—an experience which many a traveller on the Tunis-Constantine railway recalls with a shudder. That ill-starred line runs no exclusively passenger trains, but simply a few carriages interspersed here and there in a long series of goods waggons. The distance between the two cities is some five hundred kilométres, which the Flying Scotsman or the Wild Irishman would overtake (stoppages included) in seven hours. Not so, however, the "Flying Berber"! With a top speed of fifteen miles an hour it jogs, I cannot say "runs," from Tunis to Constantine, from five o'clock in the morning till long after midnight. Break the journey at intermediate stations like Souk-el-Arbäa or Souk-Ahras you cannot, the inns at these places being little

better than that one immortalised in "Anne of Gierstein" as kept by John Mengs. The buffets at these and other stations are provided with food which Signor Succi after his thirtieth day's fast would think twice before tackling, and the beverages would daunt the prowess of the Irishman who, after a glass of Scotch whisky, felt "as if a torchlight procession had gone down his throat." As for such conveniences as even third-class passengers between London and Edinburgh are accustomed to, the Tunis-Constantine railway has none of them, while the *lieux d'aisance* along the line are hardly to be approached, much less entered. Foot-warmers in first-class carriages are provided only when you near Constantine, though, as I can testify, the cold was as keen as any encountered on a winter's journey between Moscow and St. Petersburg. Yet even in such conditions invalid old gentlemen, delicate ladies, and convalescents from every form of lung mischief have, since the middle of January, been pressing southwards to Biskra, and when I left that "islet in the great sand sea" a few days ago the cry was "still they come."

French colonisation is at best but a poor affair, and after sixty years' occupation of Algeria its railway service and hotel accommodation are half a century behind the day. But competition may supply the stimulus to improvement for which native initiative has been wanting, and national jealousy may come in to accelerate both. As year by year a larger influx of pilgrims in search of warmth invades North Africa, and pushes ever southwards in quest of what the Mediterranean seaboard cannot vouchsafe, the resources of the Sahara as the great sun-bath of Europe will more and more assert themselves. If France is so blind to her opportunity as not to utilise her advantages in catering for such a public, other countries will not be slow to step in and oust her. Cardinal Lavigerie, who to the world-sympathy of a great philanthropist unites the sagacity of a statesman, has already given his compatriots the broadest of hints to this effect. "All the nationalities of Europe," he said the other day, "are pressing on and into the Sahara. There are the English *viâ* the Niger, the Italians from Abyssinia, the Belgians from the immediate south of the Equator, and Germany from the southern and eastern sides. We must at every cost safeguard our rights in the Sahara and the Soudan by a complete iron network of communication to connect our Algerian possessions with the Great Lakes." That these words have not fallen on deaf ears may be read in the prolonged debates that have recently engaged the Corps Législatif on France's North African policy, and before the century is out we may have something like the development as to transit and accommodation which should have been started when the century was still young.

As a first step to furthering the resources of South Algeria in health resorts, the access to the numerous hot sulphur baths in which it abounds should be facilitated, and the hotels at these places put on a really civilised footing. Take, as a typical example, Hammam Meskoutine, on the line of railway between Constantine and Bône. That the Romans had already known and utilised that wondrous spring goes without saying—the "Aquæ Tibilitinæ," as they called it, having baths cut by them out of the living rock, and still used by hospital patients. "The temperature of the water," says Sir Lambert Playfair, in his excellent handbook, "is no less than 203° F., which, taking into consideration the height of the source above the sea level, is just about boiling-water heat, and is only surpassed by the Geysers in Iceland and Las Trincheras in South America, the former of which rises at 208° and the latter at 206° temperature." The spectacle that the lime-encrusted rock presents is perhaps unique, only paralleled, it is said, by a similar development in New Zealand, now, alas! spoiled by a convulsion of nature. As the water gushes from the soil it forms streamlets that find their way over a steep rock into the glen below, and are used for cooking and washing by the villagers. But the edge and façade of the rock itself have the appearance of "a torrent frozen in the leap," the waves of carbonate of lime in solution having become stiffened and stagnant just as they descended from above, and hanging down like folds of drapery, snow-white and occasionally cream-coloured, over the brook, in which the yet running streamlets unite. Natural scenery in and around Hammam Meskoutine combines with specific thermal advantages to make it a favoured resort not only of the gouty, rheumatic, and neurasthenic, but of the artist and the sportsman, to say nothing of the archæologist; but even now the railway service to and from it is such as I have described. The hotel accommodation (with all goodwill on the landlord's part possible) is insufficient, and the entertainment it affords too irregular to be satisfactory three days running. What wonder if the clients it attracts, instead of remaining long enough to get the good it is capable of yielding, seldom put up with it more than forty-eight hours? Not that its unique attractions have been appreciated only by Imperial Rome. In a little grotto quite near the bungalow that does duty for a hotel—almost as hidden from the eye as the tomb of Archimedes at Syracuse—I noted the following, and (*sicut meus est mos*) transcribed it as another accession to the gallery of "Medicine's forgotten worthies":—

Docteur Moreau,
1800-1870,
Ancien Médecin des Armées et des Hôpitaux civiles de Bône,
Chevalier de la Légion d'Honneur et de l'Ordre de François 1er. d'Italie,

Fondateur de l'Établissement Thermal d'Hamman Meskoutine.
Benefaciendo vixit.

Evidently the good doctor's initiative has not been followed up in the spirit in which he took it, and Hamman Meskoutine—still without a resident physician!—remains another example out of many of what France has yet to do before she can reap the benefit of Nature's gifts so generously lavished on her African possessions.

The same holds equally—or still more—true of the lovely oases in the desert, sun-baths in the severest winter, when the French and Italian Riviera, and the Mediterranean islands, are but a shade less trying to the victim to weak heart or impaired lung than the sheltered spots on our south and west coast, which far transcend their continental rivals in comfort and civilisation. Biskra, delightful as it is, might have many counterparts within easy hail of it, if only French appreciation and enterprise were equal to the occasion. But, as I have said, the difficulty of getting to and from the neighbourhood is such that few invalids venture on repeating their visit, while the excellent Swiss Hotel and its French rival are quite inadequate to the requirements of even such a recently frequented resort. The overcrowding of which Biskra was the scene from the middle of January to the end of March (and, I may safely add, at the present moment) must ere long incur its Nemesis in blood-poisoning of the too-familiar kind. Shortly before I left there were fourteen cases of typhoid fever reported in the town, one case of diphtheria, and, in one of the hotels, a case of quotidian remittent fever, which but for prompt treatment might have drifted into what Italian physicians call "typho-malaria." There is no fall from the soil level, and sanitary engineering has yet to meet this obstacle to the speedy removal of the sewage which drains off from the hotels and pensions. It is disheartening to have to admit it, but nothing short of the pressure of competition will stimulate French energy to the undertakings which appeal from every oasis for prompt and effective realisation. That pressure, however, as Cardinal Lavigerie has already admonished his countrymen, is now within measurable distance, and, in self-defence, if from no other motive, France may yet be brought to put the railway in working order and render the hotels more attractive and to multiply the health-resorts, which invalid Europe has so long been demanding in vain. Even America, represented by numerous patients at Biskra, feels after the late terrible winters the want of the sun-bath of the Sahara, and contributes to swell the cry for extended means of utilising the months of certain warmth, of cloudless skies, of dry, absorbent, exhilarating air, which may be enjoyed at the very door of French Africa. It would, indeed, be hard to exclude from such enjoyment the compatriots of him who conceived and prescribed the "rest-cure," of which the "islets in the great sand-sea" are the appropriate haven.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Death following a Football Accident at Southport.

MR. S. BRIGHOUSE, the county coroner, held an inquest on the 6th inst. upon the body of a painter, twenty-three years of age, who died in the Southport Infirmary on the 4th from the effects of injuries received in a football match on Good Friday. The deceased collided with one of his

opponents, and fell forward with such force as to cause a compound fracture of his left arm. He was at once taken to the Infirmary, where the arm was set, but it was regarded from the first as a very serious case, and death resulted from tetanus on the eighth day. There appears to have been no blame attaching to anyone, and the jury found a verdict of "Accidental death." The deceased leaves a widow and child.

The Census and Physicians' Lives.

Among other results of the present census may possibly be a satisfactory solution of the question now being debated in THE LANCET as to whether the lives of medical practitioners are or are not equal to those of other professional men. Liverpool has had in past and present times a very fair share of practitioners who, notwithstanding a most laborious life, have lived to a great age. The late James Dawson lived to be upwards of ninety, and to enjoy excellent health in his charming retirement at Wray Castle, Windermere. His colleague, the late Henry Park, who first performed excision of the knee-joint, lived till some years past eighty. Coming to more recent years, there is now amongst us in perfect health a veteran who obtained the licence of the College of Surgeons, Edinburgh, in 1822, and graduated there in 1826. Mr. F. Worthington's death has been but recently chronicled as taking place in his eighty-second year, and there are still several who graduated in the thirties, enjoying excellent health, practising, and in the full possession of their faculties. The number who have passed the threescore and ten is apparently quite equal to that of clergymen and lawyers. When life insurance is more general among medical men than it unfortunately is now, perhaps there will be less difference of opinion among actuaries than there is at present.

The Medical Jurisprudence of Drowning.

As might be expected in such a city as this, many bodies are removed annually from the river Mersey, and a smaller number from the Leeds and Liverpool canal, to the mortuary at the Prince's Dock. The coroner invariably orders an external medical inspection in every case, and, where this appears to be called for, a post-mortem examination. The bodies seen in the mortuary comprise every variety of age, sex, and nationality; the drowning has been suicidal, accidental, or homicidal, and in many instances the body is not identified. What is remarkable is that in a tidal river so many bodies should be found long afterwards in a state of decomposition near the spot where they were last seen, or were seen to fall. In some cases it is evident that they have been kept at or near the bottom of the river by some obstruction. In other cases the body has been found remarkably well preserved in all those parts which have not been exposed to the air, whilst, from their appearance, the exposed parts indicate that death took place some considerable time previously.

The Burial of Stillborn Infants.

Many years ago, in consequence of some grave irregularity being discovered at St. Martin's Cemetery in the case of a newly born infant, the coroner's officer made it a rule daily to call there and make full inquiries into every such case. The value of this arrangement has been frequently demonstrated, and the practice continues now. As it is the parish mortuary where the large proportion of recently born infants, stillborn or deceased, are taken, the arrangement has its advantages, though it becomes a grave question as to what takes place in other cemeteries where a less strict rule prevails. Much trouble is no doubt thrown upon the officials when a medical certificate or coroner's order is not produced and a declaration is required. But the dangers of any laxity in this respect are so obvious that it is greatly to be wished that some uniform system should be adopted at every burial ground where infants are interred.

Liverpool, April 7th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Serious Charge against a "Medical" Electrician.

AT the Newcastle Police-court on Saturday last Edward Moross (whose case I referred to in last week's "Notes") came up before the magistrates on remand. Moross has for some time past been giving public exhibitions in Newcastle and its neighbourhood with demonstrations of patients "cured." Some of these patients, however, it was remarked, bore a very striking resemblance to patients "cured" by former practitioners of hypnotism and rubbing &c. Moross was again charged with having committed a rape on a girl aged seventeen, and further with having committed an indecent assault on another girl aged eighteen. The solicitor for the prosecutrix said that Moross had also inflicted upon the first girl an abominable complaint. The evidence of the police-surgeon went to support this, and also that given by a prison warder. The magistrates, after an attentive hearing of the cases, refused to take bail, but remanded the prisoner, when, they said, he would be fully committed to the Assizes, next Thursday. Demonstrations of approval on this decision being announced were made by some persons in court, and objected to by the prisoner's solicitor; but the Bench, in reply, said "they were men, and perhaps fathers."

Newcastle Royal Infirmary.

An interesting ceremony took place last week in the Royal Infirmary, being the reopening of the Chapel (St. Luke's) after redecoration and refurnishing, but especially in reference to the unveiling of new stained glass windows, the gift of Mr. John Hall, a munificent citizen of Newcastle. Dr. Gibb had defrayed the cost of furnishing and repairs, and Mrs. Wilkinson the cost of painting art decorations, while a beautiful oak pulpit lectern was the gift of Mrs. Armstrong, in memory of her late husband, Dr. Luke Armstrong, who was for eighteen years one of the honorary surgeons of the infirmary.

Middlesborough North Riding Infirmary.

The annual report of the governors of the North Riding Infirmary has been issued, and it states that the general condition of the infirmary is highly satisfactory. The statement of accounts shows an increased income amounting to £269, and an increased expenditure amounting to £293. The revenue account shows that £93 more than the income has been spent, chiefly on account of an increase in the number of patients, which amounted in the year to 802, against 734 for the previous year and 694 for the year before that. The children's ward still continues a source of interest and sympathy. Sir R. Dixon had founded a cot in commemoration of the visit of the Prince and Princess of Wales, to be called the Alexandra cot, by express permission of her Royal Highness. Although the infirmary's financial position may seem worse by £93 than during the previous year, its medical position has materially advanced.

Durham.

A much respected member of our profession, Alderman W. Boyd, J.P., M.R.C.S., received many honours from the hands of his fellow-citizens last week. On Wednesday he was presented with the honorary freedom of the city, which he has so well served for nearly fifty years. His record shows that he has been four times mayor of Durham, a member of this ancient corporation, and a medical officer of a large district for nearly fifty years, and a sanitary reformer when sanitary science was in its infancy. Alderman Boyd had further honours the next day (Thursday), when he was presented with a public testimonial in the form of an address, his portrait, a massive silver salver weighing 50 oz., together with a gold and diamond brooch inlaid with pearls for Mrs. Boyd. The Mayor of Durham has presented to the railway *employés* who have passed the examination of the St. John Ambulance Society the certificates awarded to the successful students. At the close of the proceedings presentations were made to Dr. Jepson, who has taught the class, and also to Mr. Hollins, the secretary.

Another Death from Lead Poisoning in Newcastle.

An inquest has been held on the body of a young woman aged twenty-two, who had been a worker in a white-lead factory. It was shown that she was taken ill on Feb. 20th with pains in the head and vomiting. She went to the workhouse for a fortnight, and afterwards went back to the factory. Three days following she was again taken ill, and on Good Friday went back to the workhouse, where she died on April 1st. It was further shown that she was engaged at the stoves—a department in lead-working which was considered one of the most dangerous. She had only worked sixteen days this year. The stoves affected some girls sooner than others. Girls had been known to work sixteen to eighteen years in the department. Dr. Bowlan, the medical officer of the workhouse, stated that

the girl when admitted was suffering from lead poisoning, and the verdict was in accordance with this evidence.

Berwick Infirmary.

The annual meeting of the governors of the Berwick Infirmary was held last week, and it was stated that there was a balance of £419, against £317 last year. To the Hospital Sunday Fund sixteen churches contributed, an increase of one over the previous year. More than 1400 prescriptions were dispensed during the year. There were over 300 out-door and forty-six in-door patients, including several cases of typhoid and scarlet fever.

Suicide by Dynamite.

A quarryman, who would appear to have been in a despondent state of mind from drink, committed suicide on Saturday last at Rothbury in the following extraordinary manner. He placed an ordinary dynamite blasting cartridge in the fold of his soft felt hat, set fire to the cartridge, and placed the hat on his head. In a few seconds the explosion took place, taking away the whole of the top and back of his skull, but he was found on the ground with his face uninjured; of course dead.

Bradford Infirmary.

A meeting of the Board of Management of the Bradford Infirmary was held on the 3rd inst. After the usual routine business had been transacted the Board proceeded to make some alterations in and additions to the medical staff of the institution. Dr. J. Lacy Firth, who has been house physician, was appointed house surgeon, in place of Mr. C. F. M. Althorp, M.R.C.S., who has resigned; and Mr. Pettitt, M.R.C.S., dispensary surgeon, was appointed house physician, in place of Dr. Firth. This left the position of dispensary surgeon vacant, and five candidates, three of whom were local, had been selected by the joint committee of the honorary staff committee and the house committee. Ultimately Mr. H. N. D. Milligan, M.B., C.M., was appointed to the post. The meeting then proceeded to the election of an honorary laryngologist, two honorary assistant medical officers, and two honorary assistant surgeons. Dr. Adolf Bronner was elected honorary laryngologist without opposition. Mr. C. F. M. Althorp, M.R.C.S., and Mr. William Horrocks, F.R.C.S., were elected honorary assistant surgeons. There were six candidates for the posts of assistant medical officers, but the list was reduced one-half by the first voting. Dr. H. Bronner and Mr. T. Wilmot, M.R.C.S., were elected.

Newcastle-upon-Tyne, April 9th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

University of Edinburgh.

THE Chancellor of the University has appointed Mr. Æneas J. G. Mackay, Advocate, to be his Assessor in the University Court, in succession to the late Mr. T. G. Murrey, W.S. The second professional examination commenced last week at the University, and is still going on. The number of failures in both it and the First Professional are reported as very numerous.

Medical Preliminary Examinations.

This examination, which is now conducted by the Educational Institute of Scotland, instead of by the Colleges, was held last week. There were 152 candidates, of whom eleven were women.

Health of the City.

The mortality last week was 119, making the death-rate 22·49 per 1000. Diseases of the chest accounted for 47 deaths, and zymotic diseases for 14, of which 10 were due to whooping-cough. The intimations for the week were: typhoid fever, 5; scarlatina, 11; measles, 120.

The Fever Hospital.

At the invitation of the corporation a large company of ladies and gentlemen assembled on the 3rd inst. at the City Hospital, on the occasion of the opening of a new hall for the nurses. The building, which has hitherto been used for storage purposes, is situated in the grounds, and is admirably adapted for the use to which it has been appropriated—viz., a dining- and sitting-room, an additional accommodation greatly needed by the staff and much appreciated by them. The hospital and the nurses' hall had been decorated by many friends, and handsome presents had been received for that purpose. The buildings required to be brightened as much as possible. The occasion of the present assembly was really that thanks might formally be offered for the assistance and the gifts thus bestowed.

GLASGOW.

St. Mungo's College.

The winter session of the Medical Faculty of St. Mungo's College, Glasgow, was closed on March 27th by a meeting in the Dispensary Hall, Castle-street. Mr. Hugh Brown, who presided, mentioned that it was just 100 years since the Royal Infirmary was founded by Royal charter, when the population of Glasgow was only 66,000. After briefly sketching the history of the College, Mr. Brown said that the numbers this year had been greater than last, and they had every reason to hope that as they grew in age they would grow in importance. Dr. Blackie had succeeded in getting six merchants in Glasgow to offer £1000 each. It was hoped that with these and other sums the College would soon be put on a very firm basis. Zoology classes had this year been added to the curriculum. The prizes and certificates were then presented to the successful students.

Queen Margaret College.

The last meeting of the Winter Medical Session took place on Monday week, when a large number of persons interested in the medical education of women attended. Addresses were given by Dr. R. Perry, Professor Young, and Professor McKendrick. The report, which was adopted, stated that the session had been a most successful one.

ABERDEEN.

Graduation Ceremony.

The ceremony of "capping" the graduates in medicine took place in Marischal College on Friday of last week. An immense gathering of the public filled the hall, and the undergraduates present made it one of the noisiest cappings that has taken place for many years. So boisterous was the fun that the Principal dispensed with the usual address to the graduates, and the proceedings were brought to an abrupt termination. Thirteen gentlemen were promoted to the degree of M.D. The thesis of Dr. G. S. P. Ferdinands was considered worthy of highest honours, and that of Dr. Neil M. MacFarlane worthy of commendation. Twenty-nine gentlemen received the degrees of M.B. and C.M., and two more passed all the examinations, but cannot graduate until they attain the necessary age. Three gentlemen, Mr. William Findlay, Mr. John Marnoch, and Mr. George Tawse, graduated with "highest academical honours," and Mr. Dewar, Mr. MacLennan, and Mr. John Wilson with "honourable distinction." Twenty-four candidates passed the first half of the first professional examination, sixty-two completed the first professional, and forty-four passed the second professional examination. The diploma in Public Health was conferred on Winckworth Tonge-Smith, M.D., Richard A. S. Eden, M.B., C.M., and William B. Simpson, M.B., C.M.

The Lord Rector's Assessor.

On the recommendation of the Students' Representative Council, the Marquis of Huntly nominated Mr. Peter J. Anderson, LL.B., as his Assessor in the University Court in room of the late Mr. Murray Garden. At a meeting of the Court held on Saturday last, Mr. Anderson was duly elected.

Health of the City.

During the past week the following cases of zymotic diseases were notified to the medical officer of health:—erysipelas, 1; measles, 3; scarlet fever, 10; typhoid fever, 5—a decrease of 3 on the whole, as compared with the number for the previous week.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Factories and Workshops Bill.

THE Royal College of Surgeons have petitioned against the proposal in this Bill to abolish medical certificates of fitness for the employment of children. They request that the 19th clause may be eliminated, and that clauses may

be inserted so as to extend the functions of certifying surgeons by admitting of their giving probationary permission for the employment of operatives as to whose fitness doubts might be entertained, and to allow of their specifying the sort of work to which such persons ought to be limited. Memorials also have been presented against the Bill by the University of Dublin, the Irish Medical Association, and the Irish Mercantile Association, and this evening the Public Health Committee of the Corporation will discuss a communication from Dr. C. F. Moore, Vice-President of the Factory Officers' Association, bearing on the matter at issue.

The Irish Census.

The census papers will shortly be collected, and in a few months we may expect an abstract of the returns. The commissioners appointed are the Registrar-General (Dr. Grimshaw), Mr. Matheson, and Dr. T. Bellingham Brady. His Excellency the Lord Lieutenant paid a visit on Saturday to Charlemount House, Rutland-square, and inspected the arrangements made for carrying out the census of 1891.

Health of Dublin in February.

The death-rate for February was very much under the average for that month, and was the lowest since accurate registration of deaths commenced in Dublin. The mean temperature being 2·1° higher than the mean temperature of February for the past ten years had of course an important bearing on the mortality. The zymotic death-rate was the lowest ever recorded for the month, and was lower in the city than in the suburbs.

Jervis-street Hospital, Dublin.

The vacancy occasioned by the death of Mr. Robert McDonnell has, at last, been filled by the election of Mr. J. Dallas Pratt, M.D., F.R.C.S.I. He was unopposed.

Queen's College, Cork.

In May last the president (Dr. Sullivan) died, and the report for the Session 1889–90 has only now come under my notice. The present president (Mr. Slattery) wrote the report at the end of July, but it was not furnished to His Excellency the Lord Lieutenant until December last, a delay which appears inexplicable. During the Session 1889–90, 238 students were on the college books, of which 167 were entered in the Faculty of Medicine. In referring to his predecessor, Mr. Slattery states that during his seventeen years' tenure of office he devoted his untiring energy and wide experience to the promotion of higher education in the south of Ireland, and especially in the teaching of chemical, physical, and medical science, while he initiated improvements which will be the work of many years to carry to their full development.

Infectious Diseases Prevention Act

The Corporation of Dublin have adopted this Act, which will become operative in a few weeks. Sir Charles Cameron, medical superintendent officer of health, strongly recommended its adoption, and states that perhaps one of the most important provisions in the Act is the clause empowering the detention in hospital of an infected person who is without proper lodging or accommodation, for the section of the Public Health Act dealing with the compulsory removal of patients to hospital is silent with regard to their detention. The Corporation by this Act can provide, free of charge, temporary shelter or house accommodation, with any necessary attendants, for the members of any family who may be compelled to leave their dwellings for the purpose of enabling disinfection to be carried out.

Fever in Clifden.

An epidemic of a severe febrile type is reported to be prevailing in the Renvyle district of the Clifden Union. Mr. Macdonnell, the medical officer of the Renvyle Dispensary District, has unfortunately contracted the infection, and is in danger of succumbing to the attack of what is pronounced to be typhus fever.

The Pembroke Township Commissioners have adopted the Notification of Infectious Diseases Act, and its provisions are now in operation in the township.

Mr. Mills, senior house surgeon to Jervis-street Hospital, has been elected medical officer of Rhode Dispensary, King's county.

Margaret Branney, of Downpatrick, has been returned on the census paper as aged 107 years.

April 7th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The French Surgical Congress.

THE fifth session of this Congress was, as mentioned last week, inaugurated in the large amphitheatre of the Faculty on March 30th, under the presidency of Professor Guyon. The President delivered a stirring oration, the first portion of which was devoted to a eulogy of the late Professor Trélat, a former President, whose disappearance from our midst has created such a void in scientific circles. On the same evening the members of the Congress assembled in the splendid *salons* of Madame Guyon in the Rue Roquepine, where the guests were regaled with excellent music and listened to a comedy of Meilhac, interpreted by Mmes. Réjane and Pierson, of the Odéon and Théâtre Français respectively. Thursday morning was devoted to visits to divers hospitals, and in the afternoon the peregrinations of the visitors extended to the Institut Pasteur, the Morgue, the well-known dermatological museum at St. Louis, and last, but not least, the fine new École Pratique of the Faculty, with its noble dissecting-rooms, laboratories, &c. Thursday evening found the members reassembled at a banquet at the Lion d'Or. Amongst the most important papers read at the Congress were two by our countrymen, Sir Spencer Wells and Mr. Lawson Tait, on the Remote Consequences of Ablation of the Uterine Appendages for Non-neoplastic Affections. Sir Spencer Wells, in a communication, a translation of which was read by M. Pozzi, protested once more against the modern craze for oöphorectomy. He is satisfied that affections of the Fallopian tubes are much less common than is sometimes maintained, and he claims that salpingitis and pyosalpinx are curable without operation. Mr. Lawson Tait pleaded the innocuousness of salpingo-oöphorectomy, his figures yielding a mortality of only 3 per cent. He rejects the idea that castration produces premature old age, and maintains that the effects of the operation on the sexual appetite varies with the age at which it is performed—viz., before or after puberty. Of 271 castrations performed for uterine myoma, success was complete in 257. Performed before the age of forty, the operation determined the complete disappearance of the tumour seventy times out of 100. After forty years the myoma simply diminishes in volume by a sixth or a third. In castration for ovaro-salpinx Mr. Tait recalls the difficulty of the operation, and emphasises the necessity of thoroughness in performing it. A frequent complication following this operation is the occurrence of rupture of vessels in the broad ligaments at what would have been the normal menstrual period. After a period of illness characterised by elevation of temperature and rapidity of pulse, the effusion is generally reabsorbed spontaneously. But occasionally it gives rise to suppuration, and this condition will necessitate laparotomy and drainage. Formerly Mr. Tait entertained great doubts as to the expediency of castration for the cure of neurotic affections. Now, however, he believes the operation justifiable in epilepsy of menstrual origin, and he cited an instructive case of castration for menstrual insanity in the person of the niece of a celebrated physician, in which the patient recovered completely. Professor Le Dentu, who followed, stated that he had not unfrequently traced the persistence of pain after operation to the development of a cyst in the portion of tube left attached to the uterus. These cases, he said, he treated successfully by uterine dilatation, which determines the evacuation of the contents of the cyst per vaginam. He urged the advisability of leaving no portion of the tubes behind.

Inauguration of the Franco-Dutch Hospital.

The opening on Monday last of this new nosocomial venture marks an epoch in the efforts made to administer to the medical wants of the foreign element in the heterogeneous population of this city. The institution, the creation of which is due to the generous initiative of M. Van Lier, Consul-General of the Netherlands, is at present of modest dimensions, containing only twelve beds. It is intended, however, to construct two additional pavilions, and M. Van Lier will shortly call a meeting of the representatives of foreign powers, with a view of giving practical effect to his idea of founding a vast international hospital where sick foreigners would be treated irrespectively of creed. For the present the hospital is, as the name implies,

reserved for patients of French and Dutch nationality. The Hertford British Hospital, situated outside Paris, at Levallois-Perret, which is entirely supported by funds left by that noble philanthropist the late Sir Richard Wallace, is invaluable as a refuge for the sick poor English. But the accommodation provided by this palatial institution is limited, and in times of great sickness inadequate. Many English people evince an inveterate dislike to entering a French hospital, and the creation of an establishment worked on international lines will prove a great boon to them.

A Moral Seaport!

Toulon is hardly the place one would choose for the education of one's sons and daughters. According to the journal *Le Petit Var* the number of wineshops, *brasseries*, and *bouges* directed by women of "easy" virtue is no less than 670, without counting similar establishments in the east end of the town. It is fairly safe to opine that the *clientèle* of these *lupanars* is pretty conversant with such terms as *accidents primitifs*, *accidents secondaires*, and it would seem that Madame la Maréchale would find in this degenerate town a fitting field for the display of the evangelising energies of the *Armée du Salut*.

The Pasteur Institute.

At a meeting held last week the secretary of the Institute, Professor Grancher, stated that of 1546 patients treated during the year 1890, only 10 died, of whom 6 succumbed within a fortnight of the commencement of the treatment; it being conceded that these 6 should not be counted, there remains a mortality not exceeding 0·26 per cent. It should not be forgotten that the ardent *savants* attached to the Institute are devoting much of their time to micro-biological researches on infectious diseases other than hydrophobia. The number of French and foreign *savants* now pursuing a course of study at the Institute is ninety. Professor Grancher says that the results obtained would be greater were larger funds available.

Paris, April 7th.

Obituary.

DR. JAMES EDWARD KERSHAW.

WE regret to have to record the death of Dr. J. E. Kershaw, M.A., M.B.Oxon., M.R.C.S., L.R.C.P., which took place on Saturday, March 21st, at the Hospital for Diseases of the Chest, Brompton, of which institution he was resident medical officer. His illness commenced in the acute form on the previous Monday, though he had for some time previously suffered from severe headaches and insomnia; but there had been no reason to anticipate any serious organic disease until this date. Dr. Kershaw was educated at Rugby and University College, Oxford. At Oxford he devoted himself to chemistry, and obtained a second class in the final school of natural science; while he rowed in his College torpid in 1875 and 1876. He studied medicine at St. Thomas's Hospital, where he held the post of resident accoucheur, and subsequently he became one of the clinical assistants at the Brompton Hospital. Afterwards he became resident medical officer to the Hospital for Children at Pendlebury, and on leaving that institution he was elected assistant resident medical officer at Brompton, and towards the close of 1890 was appointed resident medical officer, in succession to Mr. H. H. Taylor, who resigned. A good deal of extra work and responsibility was thrown upon him earlier in the present year by the observations which were rendered necessary by the introduction into the hospital of Koch's method of treating tuberculosis; and he was still in the active discharge of his duties when he was seized with the attack which proved fatal. He was rather reserved in manner, and did not easily make friends; but those who knew him well fully appreciated his good nature and his generosity, both of which were exceptional. He was content to carry out his duties with a quiet and unostentatious industry, which, though it did not attract much attention, was very thorough and conscientious. Chemistry was always with him a favourite study; he was an enthusiastic photographer, and also attained very considerable skill in that art. Without brilliant natural ability, he was content to do the daily duty which lay before him, and he had always that delight in life which "work alone can give."

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a quarterly meeting of the Council of the College held on Thursday, the 9th inst., the minutes of the ordinary Council of Feb. 12th were read and confirmed. The President announced the adjudication of the Jacksonian Prize for the year to Mr. William Thorburn, F.R.C.S., of Manchester, for the Dissertation on "Injuries of the Spinal Column and its Contents, &c." The subject for the prize of 1892 is "Diseases of the Ovaries and the Uterine Appendages, their Pathology, Diagnosis, and Surgical Treatment."

The Council agreed to the report of the Committee on the Extension of the College Premises, and adopted their resolutions in regard to alterations in the fittings of the new museums. Amongst other resolutions in the report, the Committee express their regret that, having taken into consideration Mr. Hutchinson's offer to present to the College his collection of Clinical and Pathological Drawings, the arrangement of the Museums approved by the Committee prevent them from recommending compliance with the conditions of Mr. Hutchinson's offer.

The following report of the Committee of Management of the two Colleges was read, approved, and adopted, subject to the approval of the Royal College of Physicians: "That having received from Dr. G. Vivian Poore, Honorary Secretary General on behalf of the Organising Committee of the International Congress of Hygiene and Demography, an application for permission to use the Examination Hall for the purposes of the Congress during the week beginning the 10th of August, they recommend that the Colleges do accede to Dr. Poore's request. The Committee also recommend that the Royal Southern Hospital, Liverpool, which is in sufficiently close proximity to University College, Liverpool, be now recognised as a 'Hospital in connexion with a recognised Medical School,' at which the whole period of attendance on medical and surgical hospital practice and medical and surgical clinical lectures may be completed, the authorities of that hospital having satisfied the Committee that adequate arrangements exist for the instruction of students."

The President reported that, in pursuance of the provisions of the Bradshawe Bequest, he had chosen Mr. J. W. Hulke as the Bradshawe lecturer for the ensuing collegiate year, and that the lecture would be delivered at some convenient date in November or December, of which due notice would be given by circular to members of the Council.

The Council elected Mr. O. Pemberton as the Morton lecturer on Cancer and Cancerous Diseases for the ensuing collegiate year.

It was agreed to give an entertainment by the Council of the College in August to the members of the International Congress of Hygiene and Demography, and it was left to a committee to fix the date and make arrangements for the entertainment.

Monday, May 11th, at 3 P.M., was selected by the Council as the most convenient date for the meeting of Fellows and Members in reference to the scheme for the reconstitution of the University of London.

A letter was read from Mr. H. P. Dunn, reporting the views of the committee of the Association of Fellows on the opinion of the Attorney-General and Mr. Paget, with regard to the powers of the College to call meetings of the Fellows.

A letter of the 14th ultimo from Dr. James Holmes, honorary secretary of the Association of Certifying Surgeons, was read, calling attention to Clause 19 of the Factories and Workshops Act Amendment Bill, and expressing the hope that the College would use its influence to prevent the said clause being passed. The President and Vice-Presidents were requested to take what action they might consider desirable in the matter.

A letter of the 25th ultimo from Mr. C. S. Sherrington, honorary secretary of the Physiological Society, forwarding a copy of the following resolution adopted by that Society, was read and laid before the Council—viz., "That, in the opinion of this Society, it is important, in the interests of the teaching of physiology, that, as recommended by the General Medical Council, a large portion, if not the whole, of the additional year which is to be added to the medical curriculum should be devoted to Elementary Physics, to Chemistry, and especially Biology." A reply was returned to the effect that the subject was already under the consideration of the Council.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board at a meeting of the Examiners on the 4th inst.:—

Physiology only.—Alfred H. Hardcastle, student of Yorkshire College, Leeds; H. Spencer Hughes, of Queen's College, Birmingham; J. Alphonsus Dawes, of Queen's College, Manchester; Stephen L. Martin, of London Hospital and Mr. Cooke's School of Anatomy and Physiology; H. Myddelton Moore, Horace R. Pring, Henry Knight, Gerald L. Hanwell, Lancelot M. Breton, Malcolm White, and Edgar C. Peru, of St. Thomas's Hospital; Hamilton Hearnden, John J. Culmer, William J. Burroughs, Alfred Alexander, and C. Melville Greenway, of Guy's Hospital; Nowriji M. Tarachand, of Bombay and Middlesex Hospital; A. Eldon Scott, of Middlesex Hospital; Walter Allingham and John F. H. Iles, of St. George's Hospital; Robert D. Cox and S. C. Collingwood Fenwick, of St Mary's Hospital; John Moses, of London Hospital; and Herbert Jenkins, of University College.

Passed on the 6th inst.:—

Anatomy and Physiology.—Reginald G. Hann, student of Yorkshire College, Leeds; Alfred E. Thompson, of Queen's College, Belfast; Charles Porter, of Queen's College, Cork; Frederic W. Willway, C. L'Ostle Miall, A. Bloomfield Densham, and A. E. Raif Rutherford, of Bristol Medical School; Harold Ashton, of Anderson's College, Glasgow; Joseph Cryer, Samuel A. Archer, W. Hindshaw Budd, and David D. Stewart, of University College, Liverpool; J. Hedley Marsh, J. Ramsay Bishop, Ernest Knight, and Arthur Walker, of Owens College, Manchester; Leonard S. Tomkys, of Queen's College, Birmingham; Walter F. Miller and Ernest H. Drake, of Guy's Hospital.

Anatomy only.—Thomas Astbury and Ambrose H. Palmer, of Queen's College, Birmingham; John Tilsley, W. A. P. A. V. Price, and F. D'A. M. Williams, of Bristol Medical School; Arthur E. Syme, of Melbourne University; Flavell Edmunds and Percy Slack, of Sheffield Medical School; Frank W. Stokes, of University College; Winthrop T. Talbot, of Boston University and London Hospital.

Physiology only.—Bruce E. Edge, Richmond Goulden, Philip Wilkinson, and T. Leiming Webster, of Owens College, Manchester; and Jas. E. Gordon, of Glasgow University.

Passed on the 7th inst.:—

Anatomy and Physiology.—George V. A. Robertson, Richard L. B. Smith, David Stephenson, and Frederick Walker, students of the Yorkshire College, Leeds; F. Ward Crossman, Arthur Hudson, Edward H. Marsh, and Frederick L. Titley, of Bristol School of Medicine; Kenway T. Williams, Frederick J. V. Hall, T. S. F. Hudson, W. D'Este Emery, J. Copeland Poole, Edward A. Dando, and Gilbert W. Charsley, of Queen's College, Birmingham; Edwin Quayle, Alan McDougall, Samuel C. Salter, Albert Thorp, William J. Hoyton, and Joseph Law, of Owens College, Manchester; Lionel S. Partridge and H. Russell Welsh, of Oxford University; Clement W. Branson, of Sheffield Medical School; David Morrison, of University College; and Marcus S. Paterson, of St. Mary's Hospital.

Anatomy only.—Charles H. Ackland and Albert T. Morgan, of Bristol Medical School; William H. Cooper, of Bristol Medical School and Mr. Cooke's School of Anatomy and Physiology; H. Meredith Harrison, of St. Thomas's Hospital; and W. Bryce Orme, of University College.

Physiology only.—Arthur D. Griffiths, of Bristol Medical School; Stephen Langton, of St. Mary's Hospital.

Passed on the 8th inst.:—

Anatomy and Physiology.—George E. Barcht, G. Hebb Cowan, and Francis W. Walton, students of London Hospital; Ernest W. Ormerod, William H. Symons, Brice Collyer, and Arthur D. Ducat, of St. Bartholomew's Hospital; D. Egryan Jones, of Trinity College, Toronto, and St. Bartholomew's Hospital; Edward T. Jones and A. Wanstall Clarke, of University College; G. Haylett Lock and Walter H. Hargreaves, of Middlesex Hospital; A. Winsmore Hooper, Arthur E. Thorpe, and J. Wiseman Laver, of St Thomas's Hospital; Reginald A. Cowie, of Cambridge University and St. Thomas's Hospital; Arthur Bousfield, of King's College; A. Cecil Hovenden, G. Stanley Hovenden, and Howard W. Graham, of Guy's Hospital; Arthur G. Bennett, of St. Mary's Hospital and Mr. Cooke's School of Anatomy and Physiology; Dossabhoy Nowrojee, of Madras Medical College; and Thomas S. Davies, of St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Anatomy only.—Robert Serjeant, of Guy's Hospital; Samuel E. Price, of London Hospital; and Arthur P. Woolright, of St. Bartholomew's Hospital.

Physiology only.—Ernest Shepherd, of St. Mary's Hospital; Louis J. A. de Gébert, of Middlesex Hospital; Mark R. Taylor, of St. Bartholomew's Hospital; George W. Gostling, of University College; John Challice, of London Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—**The following gentleman, having passed the necessary examinations, and having conformed to the by-laws and regulations, was at the quarterly meeting of the Council on the 9th inst. admitted a Member of the College:**

Dumaresq, Mark Bayfield, L.S.A., Streatfield-street, Burdett-road.

The following gentleman, having previously passed the necessary examinations, and having now attained the legal age (twenty-five years), was at the same meeting admitted a Fellow of the College:

White, Gilbert Benjamin Mower, M.B. Lond., Hazelville-road, N., Diploma of Member, dated Aug. 2nd, 1888.

UNIVERSITY OF ABERDEEN.—The following candidates have received degrees in Medicine and Surgery:—

Degree of M.D.—William Alexander, M.A., M.B., C.M., Tarland; Edward Bovill, M.B., C.M., Bengal; Thomas Joseph Compton, M.B., C.M., Norwich; John Cragie, M.B., C.M., Chard; George S. P. Ferdinands, M.B., C.M., Aberdeen; Neil Morrison MacFarlane, M.B., C.M., Preston; Thomas William Adam Napier, M.B., C.M., Egremont, Cheshire; John Moysey Rattray, M.A., M.B., C.M., Frome; John Scott, M.A., M.B., C.M., Manchester; Charles Carter Shepherd, M.B., C.M., Kidderminster; John Taylor, M.B., C.M., Bootle; Thomas Harvey Thomson, M.B., C.M., Campbeltown; Richard Mahoney Townsend, M.B., C.M., Cape of Good Hope. (The thesis of George S. P. Ferdinands was considered worthy of Highest Honours, and that of Neil Morrison MacFarlane of Commendation.)

Degrees of M.B. and C.M.—Alex. G. Allan, M.A., Portsoy; James Bell, Cults, Aberdeen; Alfred H. Bennett, South Australia; Sidney H. Burnett, Manchester; Wm. H. Clark, Kintore; James D. Crow, M.A., Aberdeen; Patrick W. Diack, M.A., Aberdeen; John P. Farquharson, Aberdeen; *Wm. Findlay, M.A., Aberdeen; James W. de Hoedt, Ceylon; Andrew Hunter, Aberdeen; Samuel C. Ironside, Aberdour; John H. Lumsden, Fortrose; George Lyon, Whitehills, Banff; James M'D. M'Kay, Sutherlandshire; George Mackie, Insch; †Roderick M. MacLennan, M.A., Ross-shire; *John Marnoch, M.A., Aberdeen; Charles Milne, Newhills; Thomas Pimley, Preston; A. Cumming Ross, Craigellachie; David Russell, Banchory; Walter W. Sinclair, Banchory; Charles E. G. Simons, Merthyr Tydfil; George Snell, British Honduras; William H. Stephen, Newhills; *George W. H. Tawse, Aberdeen; Clarence E. Wigan, Somerset; †John T. Wilson, Glasgow. (Robt L. Brander and †William J. Dewar, Arbroath, have passed the examinations for the degrees of M.B. and C.M., but will not graduate until they attain the necessary age.)

* With highest Academical Honours. † Honourable distinction.

The diploma in Public Health has been conferred on—

Richard A. S. Eden, M.B., C.M., Aberdeen; William B. Simpson, M.B., C.M., Bedale; Winckworth Tonge-Smith, M.D.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—**The following have passed the Preliminary Examination:**

J. Barry, J. Bluett, J. Brogan, M. Caraher, M. Carroll, D. Clarke, H. Conyngham, H. Crumplin, W. Cummins, P. Dempsey, L. Fannin, E. Fenton, T. Fisher, P. Fitzsimons, R. Fox, R. Glynn, C. Hodgson, F. Jackson, W. Lawler, J. Leventon, V. Magee, J. Murdoch, J. Murphy, B. McCaul, J. McCarthy, G. McDonnell, D. Spillane, J. Wallace, and A. Goring.

Physics.—J. Benson, M. Carroll, W. Carroll, T. Crean, H. Crumplin, G. Creighton, W. Darby, P. Dempsey, R. Fox, R. Glynn, A. Halligan, B. Hamilton, M. Hurly, H. Kennedy, L. Lett, V. Magee, J. Maughan, W. McCann, B. McCaul, G. McDonnell, J. Neary, J. O'Keeffe, T. Palmer, J. Pigott, S. Scott, G. Simpson, J. Smyth, W. Stratton, J. Thompson, C. R. Tichborne, F. Wise, and A. Young.

SOCIETY OF APOTHECARIES OF LONDON.—**The following candidates have passed the recent examination in the subjects indicated:—**

Arts.—First Class: C. P. Woodstock, E. M. Leney, B. F. Henry.—*Second Class:* G. S. Andrewes, C. J. Armson, C. E. Blackstone, F. B. Cardozo, P. Cator, G. A. Crowe, H. E. Fryer, H. Hilliard, J. Ingram, H. E. Izard, W. B. Kingdon, A. E. Malaher, B. Rowlands, H. J. M. Wyllys. (There were 158 candidates, of whom 3 were placed in the First Class and 14 in the Second Class, having passed in all the subjects required for registration as medical students. 108 passed in one or more of the subjects.)

Surgery.—E. M. Dobinson, Guy's Hospital; W. B. Duck, M.A. Oxon., Oxford University and St. Mary's Hospital; G. V. M. Gideon, St. Mary's Hospital; C. D. Holmes, Liverpool University College; S. R. Lane, Glasgow, Middlesex, and London Hospitals; W. C. Lattey, St. George's Hospital; W. S. McGeagh, L.K.Q.C.P.I., St. Thomas's Hospital; L. E. Parkhurst, B.A. Oxon., Oxford University and St. Mary's Hospital; A. Plumbe, London Hospital; F. Spurr, Sheffield and Middlesex Hospitals.

Medicine, Forensic Medicine, and Midwifery.—E. A. R. Covey, St. Bartholomew's Hospital; H. H. Crickitt, St. George's Hospital; G. V. M. Gideon, St. Mary's Hospital; G. Jones, M.A. Oxon., Oxford University and London Hospital; A. J. Lambert, Leeds Yorkshire College and Westminster Hospital; A. E. Mayner, M.D., C.M., Montreal University; W. F. H. Newbery, M.D., C.M., Trinity Medical College, Toronto; A. S. Phillips, St. Thomas's Hospital; R. D. Waghorn, Westminster Hospital; E. A. Wimberley, Birmingham, Queen's College.

Medicine and Midwifery.—T. C. Hughes, Westminster Hospital; L. Roberts, Cambridge University and St. Mary's Hospital.

Midwifery.—R. W. Brimacombe, Birmingham, Queen's College, and St. Mary's Hospital; J. S. Newington, Edinburgh University.

Messrs. Crickitt, Gideon, Jones, Lambert, Mayner, Newbery, Parkhurst, and Waghorn were granted the Diploma of the Society, qualifying for registration, and entitling them to practise the three branches of the profession—Surgery, Medicine, and Midwifery.

GLANDERS IN HUNGARY.—**News from Parndorf, near Pressburg, states that the whole of the horses in two stables there had to be killed in consequence of an outbreak of glanders amongst them. The veterinary surgeon and the two farmers who owned the animals were wounded in destroying the horses, blood poisoning supervening to all three of them, which had been fatal to the veterinary surgeon, and a like result was apprehended to the farmers.**

MEDICAL MAGISTRATE.—Mr. Henry Laver, M.R.C.S. &c., has been placed on the Commission of the Peace for the Borough of Colchester.

THE CENSUS IN INDIA.—The returns of the census in India, just completed, show the population of the Indian Empire to be 285,000,000, being an increase of fully 39,000,000 since the last census, taken in 1881.

OPEN SPACES.—The burial ground of the parish church of St. Giles, situated in the High-street, which has been for many years in disuse and closed to the public, has been taken over by the district board of works, and laid out as a recreation ground.

CAVENDISH COLLEGE, CAMBRIDGE. — An examination will commence on July 7th for one entrance scholarship of £50, one of £40, and at least two of £30, open to candidates who will be under eighteen years of age on Oct. 1st. Candidates may offer one or more of the following subjects: classics, mathematics, natural science, modern languages. For particulars application should be made to the master.

THE INTERNATIONAL CONGRESS OF HYGIENE.—The Government of Denmark has accepted the invitation to be represented at this Congress, to be held in London in August next, and has appointed as its representative Dr. J. Lehmann, dean of the Royal Sanitary Council. The American Government has also notified its intention to appoint representatives at the Congress, and will give general and wide publicity to the Prince of Wales's invitation, with the view that representatives may attend from learned institutions in the United States.

LITERARY INTELLIGENCE.—The first number of the *Nurses' Journal*, the organ of the Royal British Nurses' Association, has appeared. The contents are as varied as the aim of the publication will admit of, and are on the whole interesting.—A new serial, the *Optician*, devoted to the interests of the optical, mathematical, philosophical, electrical, and photographic instrument industries, has been commenced by Messrs. Hyatt-Woolf and Hayman of Fleet-street.—Mr. J. W. Kolckmann of Langham-place announces that Vol. I. of the Transactions of the International Medical Congress held at Berlin last year is now ready.

PRESENTATIONS.—Dr. Younger, on recently resigning his appointment on the medical staff of the London County Asylum, Hanwell, after sixteen years' service, was presented by the inspectors and attendants with a richly chased silver cup, and by the nurses with a handsome and highly ornate salver, each with a suitable inscription, as tokens of the high esteem in which he was held by the subscribers. Also his brother officers gave him individual presents of value as tributes to his worth.—On April 1st, at the Huddersfield Infirmary, Dr. E. F. Scougal, the hon. secretary of the Medical Society, was, on the occasion of his marriage, presented by the members with a handsome walnut cylinder writing-table and a library chair. The table had on it a plate with the inscription, "Presented to Edward Fowles Scougal, M.A., M.D., on the occasion of his marriage, by the members of the Medical Society of Huddersfield."—Mr. P. M. Scatliff, M.R.C.S., L.R.C.P. Lond., has been presented with a handsome pedestal drawing-room lamp by the ladies who have been attending the Lordship-lane branch of the St. John Ambulance Association, as a mark of their appreciation of his services as honorary lecturer to the classes recently concluded.—Dr. Growse, the medical officer of the Marton district of the Rugby Union, has been presented with a gold albert chain, a set of gold studs, and a tankard by the inhabitants of Marton and the surrounding villages, as a recognition of his services as their medical adviser.—At a public meeting held in the Mission Hall, Sharnbrook, near Bedford, Dr. J. Somerville Johnston was presented with a very handsome walking-stick by the members of the Sharnbrook Branch of St. John Ambulance Association, as a token of esteem for valuable services rendered to two very successful classes of the branch. — Mr. E. Wilmer Phillips, L.R.C.P. Lond., M.R.C.S., who has held the office of house surgeon for the last five years in the Windsor Royal Infirmary, having resigned, to undertake private practice at Southsea, was last week, before his departure, presented with a valuable gold watch, subscribed for chiefly by the staff of the institution, with some of the managers and several of the present and past patients.

THE Lord Chancellor has appointed Mr. Francis William Maclean, Q.C., M.P., a Master in Lunacy, in the place of Sir Alexander Miller, resigned.

THE directors of the General Association of Practical Surgical Instrument Makers and Bandagers offer a prize of £10 for the best spontaneous movements of the fingers of an artificial hand in connexion with the elbow-joint. Particulars can be had from Instrumentmacher Wilhelm Tasch, Berlin, Oranienburger-Strasse, 27.

CHILDREN'S HOSPITAL, NOTTINGHAM.—The annual report for 1890 shows an increase in the total receipts for the year and a growing interest in the institution by the general public. The total income was £308 in excess of the previous year. The steady addition in the work of the hospital had necessitated an augmentation of the honorary medical staff, and the necessary appointments were made. Colonel Seely had generously hired a house as a Convalescent Home during the summer at Woodthorpe, and had placed it, free of cost, at the disposal of the committee. Forty-six children were received there, and greatly benefited by the change.

ARROW POISON OF THE PIGMIES.—An interesting account of the various arrow poisons collected by Surgeon Parke in the recent African expedition was given by him to the Pharmaceutical Society on Wednesday night. The poisons were reported by Mr. Holmes, the Curator of the Society's Museum, to be extracted from a well-known bark used as an ordeal poison in several African countries. The plant is known as Erythrophlœum Guineense. Another poison is obtained from the leaf of Palisota Barteri; the stem of unknown species of Combretum; the stem of Strychnos Icaja, a shrub which owes its poisonous properties to strychnine; and the seed of Tephrosia Vogelii, a plant largely used in Central Africa as a fish-poison.

FOOTBALL CASUALTIES.—A player in a match at Royton, on Saturday, between Helmshore and Royton, sustained a fracture of his left leg.—A young man, aged twenty-three, who was playing football for the Churchtown Football Club, on Good Friday, at Southport, against Little Lever, died in the Southport Infirmary on Saturday from lockjaw, supervening on injuries sustained in a charge during the match.—A young man, aged nineteen, while engaged in football in a field in St. Paul's-road, Birmingham, on Saturday, received injuries, and was taken to the Queen's Hospital, where he died on Sunday from a contusion on the right side of the abdomen and rupture of the right kidney.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION. The following Volunteer medical officers, who have been under instruction from Surgeon R. R. Sleman, M.A., 20th Middlesex (Artists) R.V., and the staff of the school, have recently passed the proficiency examination: Surgeon Sir Morell Mackenzie, M.D., Queen's Westminster R.V.; Acting Surgeon D. Key, 1st City of London A.V.; Acting Surgeon D. Grant, F.R.C.S., 24th Middlesex R.V.; Acting Surgeon E. Younger, M.D., 3rd V.B. Royal Fusiliers; Acting Surgeon E. W. Stiven, M.D., 21st Middlesex R.V.; Acting Surgeon J. H. Griffin, London Irish R.V.; Acting Surgeon T. Fennell, 3rd V.B. Cheshire Regiment; Acting Surgeon F. Ransom, M.D., 3rd V.B. Suffolk Regiment. The next class will be held in May.

MEDICAL OFFICERS OF HEALTH SOCIETY.—A meeting of the Birmingham and Midland Branch of this Society was held at the Council House on the 2nd inst. Dr. A. S. Underhill presided. Mr. H. May (Aston) reported the result of the interview of the deputation from the Society with the Sanitary Committee of the Worcestershire County Council, in respect to the appointment or offer of the services of the county medical officer to the district authorities at a reduced salary. It appeared that the action of the County Council was misunderstood. No such offer had been made to the district sanitary authorities. Mr. May read a paper upon Recent Sanitary Legislation. He dwelt especially upon the Housing of the Working Classes Act. A discussion followed, in which Drs. Hill and Manley took part. Mr. May afterwards opened a discussion on the Infectious Diseases Prevention Act. After some observations by several gentlemen, a vote of thanks was passed to Mr. May, and the meeting closed.

THE BRITISH GYNÆCOLOGICAL SOCIETY will hold a provincial meeting on June 18th and 19th at Newcastle-on-Tyne. Dr. Robert Barnes, hon. president of the Society, will take the chair at the meetings, which will be held in the College of Medicine. Dr. R. C. Benington has been appointed general local secretary, and all communications are to be addressed to him.

MEDICAL NOTES IN PARLIAMENT.

Public Health (London) Law Amendment and Consolidation Bills.

On Tuesday, in the House of Commons, Mr. Ritchie moved the second reading of these Bills, which, he said, dealt with the public health of London, the first being a consolidating Bill and the second an amending Bill. The state of the law in regard to public health in London was very unsatisfactory. Whereas the law as to public health in the provinces had been amended and consolidated by the Act of 1875, the public health law of the metropolis was scattered over a number of Acts, beginning with Michael Angelo Taylor's Act of 1817, and was contained in twenty-nine separate statutes. Under the present law the sanitary authorities might contract with the managers of the Metropolitan Asylums Board for the provision of hospital accommodation. In that case the sanitary authorities were liable for expenses, but in cases in which the sanitary authority thought them able to do so the patients could be made to pay. This Bill proposed to extend that provision to hospitals built by the sanitary authorities themselves. The Bill provided for the immediate abatement of a nuisance, not only where it was actually proved to exist, but also where it was injurious or dangerous to the public health. At present only the persons affected by the nuisance or the local authority could move in the matter, but the present Bill provided that any person might give information of a nuisance with a view to its removal, and under its provisions any person found guilty of allowing a nuisance to exist would be held responsible for doing any work necessary to abate it. The Bill also imposed on the London County Council the duty of making by-laws for the cleansing of streets and the prevention of nuisances. This would throw upon the County Council the duty of making by-laws to put a stop to an intolerable nuisance as to which considerable complaint had justly arisen—namely, the throwing of salt on the streets of the metropolis in snowy and frosty weather. The Bill next dealt with the question of offensive trades, in which several amendments of an unimportant character were introduced. The Bill provided that where a sanitary authority caused a nuisance, or did anything injurious or dangerous to health, it might be prosecuted, and all the provisions as to nuisances should apply. As to the clearance of the footways in times of snow, the law as to footways and watercourses seemed to be that the occupier was liable to clear the snow from before his house, and to keep the footway and watercourse properly swept and cleansed. If the occupier did not perform his duty after a short interval it would be performed for him by the sanitary authority, and the cost put upon him; besides which he would be also liable to a fine for the non-performance of his duty. Nobody could fail to be struck, after a fall of snow, with the numerous cases where a large amount of pavement was left untouched for days and days; and in nine cases out of ten this was in connexion with unoccupied houses, or gardens and squares. Clearly it should be the duty of the sanitary authority to see that this state of things should not exist, and they were now given the power, and the duty was imposed upon them, of ascertaining who was liable, and of making him pay wherever it was possible to do so. With regard to streets, the Bill required the sanitary authority to perform its duty of sweeping and cleansing the streets, and the sanitary authority was made liable to a fine if it did not perform its duty as far as reasonably practicable. The Bill did not set out a period within which the removal must be made; but the sanitary authority would be bound to fix some proper and reasonable period for clearing away dust and house refuse, and they would be liable to a fine if, proper notice being given, they did not at once comply with the request of the owner. The next portion of the Bill dealt with the question of unsound articles of food. They proposed to extend the existing law, which applied only to those who exposed such articles for sale. This Bill applied to every article used for food, and gave power of both search and destruction. The existing law was considerably strengthened. By the law as it stood at present it was only the individual who exposed the article for sale who was punishable by law; they now proposed to make the person from whom the food was bought, as well as the person selling it, punishable for the offence. Then came the question of proper water-supply to houses. In his opinion a house without a water-supply was a nuisance and ought to be abated, and they now declared that being without a proper supply was a nuisance that rendered a house unfit for habitation. They also amended the law with regard to infectious diseases. The provision of the present law with regard to disinfection was entirely permissible. They proposed to make it necessary for the sanitary authority to provide proper premises for disinfecting bedding, clothing, &c., and also vehicles for carrying these articles to and fro. Representations had been made to the Local Government Board, especially from Maidstone, as to persons selling fruit who had been found manifestly suffering from infectious disease. It was eminently desirable to prevent a person suffering from an infectious disease from handling articles of food at all, and therefore the Bill imposed a penalty upon anyone milking, selling fruit, or otherwise engaging in an occupation connected with food who knew himself to be suffering from an infectious disease. They also proposed, with regard to the notification of infectious diseases, that the return required to be sent by the Metropolitan Asylums managers to the County Council should be sent by them to every sanitary authority in London, and to the London School Board, and to the managers of every public elementary school in London. With regard to mortuaries, every sanitary authority must make one. At present the law was only permissive, and considerable scandals had arisen in this respect. Every sanitary authority must also, if required by the County Council, provide a building for post-mortem examinations. One very important matter with which they dealt in this Bill was the question of underground or cellar rooms. By the Public Health Act of 1875 very stringent regulations had been made to secure ventilation &c. In London, however, so far as underground dwellings were concerned, the provisions with regard to the preservation of health were extremely few and weak. By this Bill ample provisions were made with regard to height, drainage, and ventilation. The Government's proposal was to apply to underground rooms the complete Public Health Act of 1875. The proposals in the Bill would apply to all underground rooms, with the reservation that the London County Council might by general regulation, or on application of the owner of particular rooms, dispense with or modify the provisions as far as they involved structural alterations, having due regard to the necessities of the case. One of the proposals of the Bill referred to the inspectors of nuisances and medical officers of health. Means were provided by which an adequate number of proper persons should be appointed as inspectors of nuisances, henceforth to be called sanitary inspectors. Complaint was made that the number of these inspectors in some parts of London was not nearly adequate for the area over which they exercised their jurisdiction, and it was quite impossible for the sanitary authorities to carry out the law unless they had a sufficient staff of inspectors. The Bill provided that the Local Government Board might, if satisfied on representation of the London County Council that a sanitary authority had not appointed a sufficient number of inspectors, order that sanitary authority to appoint as many more as might be deemed necessary. It was also provided, with a view to secure fit and proper persons as inspectors, that their appointment should be subject to regulations of the Local Government Board; and, with regard to the medical officers of health and sanitary inspectors, it was provided that they should be removable by the sanitary authority only with the consent of the Local Government Board. This provision had been urged from many quarters, and there was much force in the argument that, unless these officers were to a certain extent independent of the local authority, they could not perform their duties with absolute freedom. With regard to the non-performance of duty by the sanitary authority at present in London, any person might make complaint against the sanitary authority to the Local Government Board; the Local Government Board might hold a local inquiry into such complaint, and, if satisfied of its justice, they might appoint some person to perform the neglected duty. Under the law as it stood, therefore, the London County Council might be appointed; and the provisions of the Bill really made a modification of the existing law in favour of the vestries. In future it would not be in the power of any individual to put the sanitary authorities to all this trouble, and when complaint was made it would have to be made with the authority of a popularly constituted and responsible body. In many local matters the London County Council rightly had powers of a very extensive character; and it was right and proper in dealing with a great question of public health that the County Council, representing all parts of the metropolis, should be eligible for appointment with regard to the performance of duties which had been neglected by the local sanitary authorities If the House would assent to the Government's proposals, he believed that they would prove to be productive of enormous benefit to the health of London. It was proposed to refer both Bills to one of the standing committees, and he did not doubt that they would come back from that committee even better measures than they were now. He begged to move the second reading.—Mr. Stuart said it was right that powers should be given to the County Council in matters in which it did not supersede the other local authorities, but where it was to frame by-laws which they were to carry out. It was satisfactory to hear that the right hon. gentleman did not share that distrust of the County Council which some Ministerialist members for the metropolis professed to entertain. The work which the Council had done, especially in respect of the housing of the poor, was sufficient to show that it was wholly undeserving of such distrust. An article which appeared in THE LANCET emphasised the fact that the London County Council had not the powers possessed by any suburban or rural authority with respect to insisting upon the open spaces around houses that were necessary for the health of their occupants, and he trusted that this defect would be supplied by an amendment of the Bill. In order to give efficiency to the sanitary arrangements of London two important reforms were necessary. The first was that there must be placed at the disposal of the local authorities funds other than those obtained by the rating of occupiers. The second was that the local government of London must be completed by the establishment of the district councils which were promised in 1888, and which they had several times heard from the right hon. gentleman were provided for by a Bill he had prepared, and which the House was anxious to see. It might be said that every part of the metropolis was, so to speak, thirsting for this measure, and it was one that could be introduced and carried only by the Government of the day.—Mr. J. R. Kelly said he did not think it was wise, or in the interests of the public, that the antiquated system should be continued of throwing on the occupier of a house the obligation of sweeping the snow from the pavement in front of his door. If the burden were cast on the local authority the result would be that hundreds of men would get an honest day's work, the streets and pavements would be systematically swept, and no one would have reason to complain except the idle loafer who blackmailed the unfortunate householder. He thought that London had very little to gain from the Bill. There were provisions so harassing in their character, the machinery of the common informer was so foreign to the English spirit, there was so little done to relieve the unfortunate metropolitan householders from the foolish burdens cast upon them, that he felt disposed, if any hon. member were to move the rejection of the second reading, to support him.—Mr. Pickersgill submitted, however, that all the subordinate authorities in London ought to be subject to those by-laws. (Mr. Ritchie: They are.) The City of London was exempted from the operation, and it was unfair and impolitic to exempt it. The Bill, as a whole, had many good features, and no doubt it would be improved in its course through committee.—Sir A. Rollit said there could not be any doubt that many of the provisions of those Bills were urgently required, and that they introduced valuable amendments in the law. Provisions relating to the public health were scattered up and down many statutes, and it would be of great advantage to have them consolidated in one measure. One of the defects of the London County Council was that it had been scarcely able to cope with the immense amount of work which had to

be dealt with. Yet these Bills would impose upon it duties which he thought it would not be able adequately to fulfil. While he welcomed many of the provisions in these Bills, he thought that in committee exception would have to be taken to some of them.—Dr. Farquharson thought the Bill would do a great deal to remove some of the minor miseries of life under which Londoners had been groaning for so many years. Hon. members had not yet had time to go thoroughly into this Bill, and it would, of course, have to be considered by a committee upstairs.—Mr. Isaacs, while thanking the right hon. gentleman for introducing the Bill, was rather disposed to think that the best course would have been to previously introduce a measure for creating district councils.—Mr. Causton, Mr. W. Isaacson, and Mr. Whitmore took part in the debate.—Mr. Ritchie, in reply, said it was not surprising that objection should be taken to certain details, considering that the Bill dealt with so many important and difficult questions. The Bill was not going beyond the existing law. In some respects, indeed, it modified the existing law, because it provided that it should not be in the power of any individual to put that machinery in motion, but the County Council alone; and the County Council even should not be at liberty to interfere until they had obtained the previous assent of the Local Government Board. If in any matter of form or language the Bill was thought to create undue powers of interference, the Government would be glad to consider amendments to remove doubts or difficulties in that connexion. He should be the last person to do anything calculated to prevent good men from coming forward to serve on the local bodies. With regard to medical officers of health and sanitary inspectors, the position was this—that at the end of the term of their present appointment they would become officers under this Bill; until the present appointments ceased they would not.—Mr. Causton stated that many officers were not subject to reappointment.—Mr. Ritchie was not aware of cases in which they were not reappointed; but, in any event, existing appointments might be terminated by mutual consent and a new appointment made. He would only say, in conclusion, that the Government did not regard this Bill as a party one, or in a political sense a contentious one, and they should be glad to listen to any suggestions in committee, and to consider dispassionately, and he hoped favourably, all proposals which they thought would be improvements in the Bill. The Bills were then read a second time, and referred to the Standing Committee on Law.

Certifying Factory Surgeons.

On Thursday, Mr. Jacob Bright asked the Secretary of State for the Home Department, seeing that he had stated that his opinion in regard to the certifying surgeon was based upon the best information, whether he would inform the House if he had consulted the Chief Inspector of Factories upon the subject, and also the Superintending Inspector, and the other inspectors in the districts chiefly interested, as to the advisability of abolishing the certifying surgeon's certificate of fitness; and, if not, why not.—Mr. Matthews replied: I have, in the ordinary course, communicated with the Chief Inspector of Factories on this subject, and I have learned through him the views of his department. It is hardly reasonable to suppose that in dealing with a question of this kind I should not avail myself and take advantage of all the sources of information at my disposal.

Volunteer and Militia Surgeons.

On the same day Dr. Clark asked the Secretary of State for War whether Volunteer surgeons are now promoted to brigade rank, and if so whether it is the intention to promote to a similar rank the senior Militia surgeons, some of whom had been serving before the Volunteer force was instituted.—Mr. Stanhope replied that the reason why the Volunteers have this advantage is that they are organised in brigades, and the rank of brigade surgeon is conferred in recognition of the increased responsibility attached to the principal medical officer of a brigade.

Opium Consumption.

Mr. Samuel Smith asked the Under Secretary of State for India whether he could state what was the total consumption of opium in India in 1880, and also in Burmah in the same year; and what were the figures for the latest year for which statistics had been obtained for India and for Burmah.—Sir Jas. Fergusson, who replied, said the consumption of opium in Madras and Bombay for 1880 could not be given. In 1889-90 it was 1594 chests. Excluding Madras and Bombay, but including Lower Burmah, the total consumption in British India for 1880-81 was 5606 chests, and for 1889-90, 4800 chests. In Lower Burmah the consumption was for 1880-81, 812 chests, and for 1889-90 it was 794 chests. The consumption in Upper Burmah was not known.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on April 7th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	163	47	..	41	3	254	442
North-Western Hospital	139	40	..	12	1	192	443
Western ,,	149	14	..	13	1	177	254
South-Western ,,	150	21	..	14	1	186	340
South-Eastern ,,	174	12	..	19	2	207	462
Northern ,,	218	22	..	10	..	250	480
Totals .. — ..	993	156	..	109	8	1266	2391

SMALL-POX.—*Atlas* hospital ship, 7.

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Sea-sickness. By T. Dutton, M.D. Durh. Second Edition. pp. 79. Price 1*s.* 6*d.*

CASSELL & CO., London.
Materia Medica and Therapeutics. By J. Mitchell Bruce, M.D. Lond. 19th Thousand. 1891. pp. 582.

DAVIS, F. A., Philadelphia and London.
Medical Symbolism. By Thos. S. Sozinskey, M.D., Ph.D. Illustrated. 1891. pp. 171. Price 6*s.*

KEGAN PAUL, TRENCH, & CO., London.
Examination of Water for Sanitary and Technical Purposes. By Henry Leffman, M.D., Ph.D., and William Beam, M.A. Second Edition. Illustrated. 1891. pp. 130.

KEMP & CO., Bombay (London Office, 84, Leadenhall-street).
The Prescriber's Pharmacopœia. By Kemp & Co. Second Edition. 1891. pp. 428.

LEWIS, H. K., Gower-street, London.
Elements of Practical Medicine. By Alfred H. Carter, M.D. Lond. Sixth Edition. 1891. pp. 496.
A Manual of Diseases of the Nose and Throat. By P. S. Hutchinson, M.R.C.S. Illustrated. 1891. pp. 127.
The Comparative Climatology of London and the chief English Health Resorts. By B. Thornton, M.R.C.S., L.R.C.P. Lond. 1891. pp. 15.

PENTLAND, YOUNG J., Edinburgh and London.
Pulmonary Tuberculosis, Etiological and Therapeutic. By R. W. Philip, M.A., M.D., F.R.S.E. pp. 55.

PERCIVAL & CO., King-street, Covent-garden, London.
The Essentials of School Diet. By Clement Dukes, M.D., B.S. Lond. 1891. pp. 187. Price 6*s.*

SMITH, ELDER, & CO., Waterloo-place, London.
Dictionary of National Biography. Edited by Leslie Stephen and Sidney Lee. Vol. XXVI. Henry II.—Hindley. 1891. pp. 448.

The Visit of the Tenant-Farmer Delegates to Canada in 1890 (published by authority of the Government of Canada, 1891).—The Thermal Springs District of New Zealand, and the Government Sanatorium at Roturua; by A. Ginders, M.D. (G. Didsbury, Government Printer, Wellington, 1890).—Charter, Constitution, By-laws, and List of Fellows of the New York Academy of Medicine (printed for the Academy, New York, 1891).—Report of the British Chamber of Commerce for the year 1890 (C. Skipper & East, Paris, 1891).—A Note for the Successful Treatment of Diphtheria, also of the Coryza and Malignant Sore Throat of Scarlatina; by Henry Thomas, M.D. (Kegan Paul, Trench, & Co., London, 1891); price 1*s.*—Modern Abdominal Surgery; by Sir T. Spencer Wells, Bart., F.R.C.S. (J. & A. Churchill, London, 1891).—Annales de l'Institut Pasteur; par M. E. Duclaux; Tome V., No. 3 (G. Masson, Paris, 1891).—Archives de Médecine Expérimentale et d'Anatomie Pathologique; par MM. Grancher, Lépine, Straus, et Joffroy (George Masson, Paris, 1891).—Estadistica de las Inoculaciones con Mosquitos contaminados en Enfermos de Fiebre Amarilla; par los Dres. Finlay y Delgado (A. Alvarez y Comp., Habana, 1891).—Behandlung weiblicher Geschlechtskrankheiten; von Thure Brandt (Fischer, Berlin, N.W., 1891).—Report of the State of the Blood and the Bloodvessels in Inflammation: together with a Report on Lymphatic Hearts and on the Propulsion of Lymph from them, through a proper Duct, into their respective Veins; by T. Wharton Jones, F.R.S. (London: Baillière, Tyndall, & Cox).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

AULD, A., M.B., C.M. Glasg., has been reappointed Medical Officer for the Heck District of the Pontefract Union.

BLAIKIE, A. B., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 1 District of the Oswestry Union.

BRONNER, ADOLPH, M.D. Heidelb., M.R.C.S., has been appointed Laryngologist to the Bradford Infirmary.

BRONNER, HERMANN, M.D. Strasburg, has been appointed Honorary Assistant Medical Officer to the Bradford Infirmary.

BURDWOOD, J. W., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for Bourne, Lincolnshire.

CARTWRIGHT, J. P., M.R.C.S., has been appointed Medical Officer of Oswestry and the Workhouse.

COLLUM, ARCHIE T., L.R.C.P., M.R.C.S., has been appointed House Physician to Charing-cross Hospital.

COSENS, CHAS. H. C., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Second District of the Wellington Union.

ERSKINE, ROBT., M.D. Q.U. Irel., has been reappointed Medical Officer for the Camborne District of the Redruth Union.

FRASER, HERBERT, L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Windsor Royal Infirmary, vice Phillips, resigned.

FRY, W. W. B., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Rural Sanitary District of the Builth Union.

GIBBS, CHARLES, L.R.C.P., M.R.C.S., has been appointed House Surgeon to Charing-cross Hospital.

HORROCKS, W. H., Jun., M.B., F.R.C.S., has been appointed Assistant Surgeon to the Bradford Infirmary.

HUGHES, EDGAR, F.R.C.S., has been appointed Surgeon to the St. George's and St. James's Dispensary, and Surgeon to the London Rifle Volunteer Brigade.

JULER, HENRY E., F.R.C.S., has been appointed Consulting Ophthalmic Surgeon to the London Lock Hospital and Asylum, Harrow-road.

MACGREGOR, D. A., M.B., C.M. Edin., has been reappointed Medical Officer for the Denby District of the Penistone Union.

MACVAIL, JOHN C., M.D. St. And., D.P.H. Camb., has been appointed Medical Officer of Health for the Counties of Stirling and Dumbarton.

MCLINTOCK, JAMES, M.D., B.Sc. Edin., has been appointed Medical Officer of Health for the County of Lanark.

REMFRY, LEONARD, M.A., M.D., B.C. Cantab., M.R.C.P., has been appointed Obstetric Physician to Out-patients at the Great Northern Central Hospital.

PARHAM, H. G. H., M.R.C.S., L.R.C.P., has been appointed Surgical Registrar to Charing-cross Hospital, vice F. X. Da Costa, resigned.

RIDDELL, J. S., M.B., C.M. Aberd., has been appointed Medical Officer for the West Division of the Oldmachar Parochial Board.

ROLSTON, T. R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Stoke and Tamar District of the Stoke Damerel Union.

SIMPSON, ALEX., M.A., M.B., C.M. Aberd., has been appointed Junior Assistant Medical Officer to the Sussex County Asylum, Hayward's Heath.

STONEY, P. B., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for Millom, Cumberland.

SULLY, A. MAX, L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer of the Jaffray Suburban Hospital, Birmingham.

SWALLOW, F. MCDONALD, L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer for the Silkstone District of the Penistone Union.

WILLIAMS, WM. HENRY, jun., M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed Medical Officer of Health for the Rural Sanitary Authority of the Sherborne Union, Dorset.

WILMOT, THOS., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Assistant Medical Officer to the Bradford Infirmary.

WILSON, A. C. J., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Penistone Rural Sanitary District.

YOUNGER, EDWARD GEORGE, M.D. Brux., M.R.C.P. Lond., has been appointed an Honorary Physician to the St. Pancras and Northern Dispensary.

YOUNG, JAMES, M.D. Glasg., has been appointed Assistant Surgeon to the South Dispensary, Liverpool.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ALRESFORD UNION.—Medical Officer for the Second District. Salary £100 per annum, with extra fees and vaccination. (Apply to the Clerk, Alresford, Hants.)

ALRESFORD UNION.—Medical Officer of Health for the District of the whole Union. Salary £40 per annum. (Apply to the Clerk, Alresford, Hants.)

BIRMINGHAM CITY ASYLUM, Rubery-hill, near Bromsgrove.—Clinical Assistant. Board, lodging, and washing will be provided.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Assistant Surgeon.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—Demonstratorship of Physiology. Honorarium £100 per annum.

CHELSEA.—Medical Officer of Health, Food and Drugs Analyst, and Gas Examiner. Salary £450 per annum.

DEVONSHIRE HOSPITAL, Buxton.—House Surgeon. Salary £100 per annum, with board, furnished apartments, and washing.

DEVONSHIRE HOSPITAL, Buxton.—Assistant House Surgeon. Salary £50 per annum, with board, furnished apartments, and washing.

GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary £100 per annum, with board, residence, attendance, and washing.

GENERAL INFIRMARY, Leeds.—Resident House Physician for twelve months. Board, lodging, and washing provided.

GENERAL INFIRMARY, Leeds.—Two Resident House Surgeons for twelve months. Board, lodging, and washing provided.

GENERAL INFIRMARY, Leeds.—A Resident Officer at the Ida Hospital for six months, with honorarium of £25.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer. Salary £200 per annum, with board and residence.

KING'S COLLEGE HOSPITAL, London.—Sambrooke Medical Registrar.

KING'S COLLEGE, London.—Demonstrator of Public Health.

LINCOLN ODDFELLOWS' MEDICAL INSTITUTE.—Assistant, out-door. Salary £120 per annum. (Apply to the Secretary, 12, North Parade, Lincoln.)

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Resident Medical Officer for six months.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Assistant Resident Medical Officer for six months.

NEWCASTLE-UPON-TYNE CITY LUNATIC ASYLUM, Gosport.—Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

PARISH OF BIRMINGHAM (WORKHOUSE INFIRMARY).—Medical Clinical Clerk at the Workhouse Infirmary for six months. Honorarium 15 guineas for the six months, also provided with rations (which do not include alcoholic liquors), coal, gas, apartments, washing, and attendance. (Apply to the Clerk to the Guardians, Parish Offices, Edmund-street.)

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King-street, Regent-street.—Third Honorary Physician.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

AUDLAND.—On April 2nd, at Brooklands, Wellingborough, the wife of W. E. Audland, L.R.C.P. &c., of a daughter.

BRAND.—On April 6th, at Invery, Great Driffield, E. Yorks, the wife of Dr. Brand, of a son.

BREWIS.—On April 1st, at Waratah, Mount Bischoff, Tasmania, the wife of R. Adams Brewis, M.D. Edin., of a daughter (stillborn).

BUCKLEY.—On April 2nd, at The Poplars, Thrapston, the wife of T. W. Buckley, M.R.C.S., of a daughter.

HALL.—On April 5th, at Wimpole-street, W., the wife of F. De Havilland Hall, M.D., F.R.C.P., of a daughter.

LE CRONIER.—On April 1st, at Midvale-road, Jersey, the wife of Hardwick Le Cronier, M.R.C.S., of a daughter.

SIDEBOTHAM.—On April 3rd, at Erlesdene, Bowdon, Cheshire, the wife of E. J. Sidebotham, M.A., M.B. Cantab., of a son.

TIDEY.—On April 3rd, at Villa Magnolias, Montreux, Switzerland, the wife of Stuart Alexander Tidey, M.B., of a daughter.

TURNER.—On April 6th, at Alton, Hants, the wife of T. B. Turner, M.R.C.S., of a daughter.

MARRIAGES.

ADAMS—WHYTE.—On March 12th, at St. Thomas's Cathedral, Bombay, Charles Adams, M.B., LL.B. Dub., F.R.C.S.I., son of the late Andrew Adams, Esq., Terraquin, county Tyrone, to Maude de Wyte, second daughter of the late Major John L. A. Whyte, J.P., county Clare, and Bray, Ireland.

AMSDEN—VEREKER.—On April 4th, at St. Bartholomew's Church, Dublin, George Amsden, M.B., of Essex County Asylum, Brentwood, to Annie Elizabeth, daughter of Amos M. Vereker, Esq., Wellington-place, Dublin.

BEAUCHAMP—SHARP.—On April 4th, at St. Mark's, Milverton, Leamington, Sydney Beauchamp, M.B. Cantab., second son of H. H. Beauchamp, to Edith, third daughter of the late H. Morton Sharp, of Leamington.

HARDYMAN—BEATH.—On April 3rd, at the Parish Church, West Wickham, by the Rev. F. E. Murphy, M.A., Bath, George Hardyman, M.B., C.M., of Bath, eldest son of the late John Hay Hardyman, Esq., of Heatherwick, W.S., late of the 3rd Battalion Royal Scots, to Constance Christian, second daughter of David Beath, Esq., Melbourne, Australia, and of Wood Lodge, West Wickham, Kent.

HICKLY—MAPLESTONE.—On April 1st, at St. Stephen's Church, Shepherd's-bush, Arthur Mackenzie Hickly, L.R.C.P. Lond., M.R.C.S., of Meltham, Yorkshire, to Gertrude Frances, daughter of the late H. Maplestone, R.I., Shepherd's-bush, London.

LOCKETT—SPRENT.—On April 7th, at St. Peter's Church, Southsea, by the Rev. C. R. Tompkins, Vicar, John Arthur Pope Lockett, M.R.C.S., L.R.C.P., of Woolwich, to Isabella Swanson, elder daughter of Major Sprent, late R.A., of Southsea.

MACDONALD—USHER.—On April 2nd, at 18, Lauder-road, Edinburgh, by the Rev. Robert G. Balfour, Thomas Ranken Macdonald, M.B., Surgeon, Bengal Medical Staff, to Amy Balmer, youngest daughter of Mr. Thomas Usher, of Edinburgh.

PAYNE—EDMUNDS.—On March 31st, at St. George's Church, Edgbaston, Birmingham, Willam Arthur Payne, B.A. Pem. Coll. Oxon., M.R.C.S., of Selly Oak, Worcestershire, son of F. A. Pryne, Esq., Pantre Uchs, near Oswestry, to Margaret Banks Edmunds, daughter of the late Henry Edmunds, Esq., of Elmsdale, Edgbaston.

PRAGER—KNOWLES.—On March 26th, at Brighton, Alfred Prager, L.D.S., of Portman-street, W., to Teresa Carlotta Gladys, daughter of the late Captain C. H. Knowles, R.N.

SCOUGAL—GRIST.—On April 2nd, at St. Peter's, Huddersfield, by the Rev. Canon Bardsley, M.A., Vicar, assisted by the Rev. Robert Willan, M.A., Vicar of Golcar, Edward Fowler Scougal, M.A. Aberd., M.D., C.M. Edin., Huddersfield, to Edith, second daughter of John J. Grist, Oakleigh, Edgerton, Huddersfield. No cards.

TRINDER—MOLE.—On April 7th, at Tutbury Parish Church, Staffordshire, Alfred Probus Trinder, M.R.C.S., L.R.C.P., elder son of the late Rev. Daniel Trinder, Vicar of Highgate, to Mary Maude, eldest daughter of R. L. Homer Mole, of Riverdale, Tutbury.

DEATHS.

BABINGTON.—On April 2nd, in London, Surgeon-Major Thomas Babington, Medical Staff, Retired.

DAVIDSON.—At Toowoomba, Queensland, John Maxwell Davidson, M.B., C.M. Glasg.

DAVIS.—On April 7th, at 20, Upper Woburn-place, Dr. H. P. Davis, aged 73. Friends will please accept this, the only intimation.

HOWELL.—On April 8th, at Cleeve House, West Hill, Wandsworth, Bessie, wife of J. Arthur Ives Howell, Esq., and daughter of the late John Tayler, Esq., of Gotherington, Gloucestershire, aged 31 years.

JAMES.—On April 3rd, at Ireton Wood, Derbyshire, Henry James, M.D.

STAMFORD.—On April 3rd, at Heathfield, near Alfreton, Derbyshire, Florence Louisa, wife of W. A. Stamford, M.R.C.S. Eng., and daughter of the late Hugh Eccles Walker, M.D., of Chesterfield, aged 42 years.

TONKS.—On April 2nd, at Willenhall, Staffordshire, Joseph Tonks, M.R.C.S., aged 39.

VACHELL.—On March 29th, at Victoria, Ebbw Vale, Edward Shearman Vachell, M.R.C.S., J.P. for Monmouthshire, second son of the late C. R. Vachell, M.D., F.R.C.S., Cardiff, in his 36th year.

WADE.—On April 1st, at Cross, Compton Bishop, Somerset, Edward Wade, Surgeon, aged 81.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, April 13.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. G. Buckston Browne: The Importance of the Post-prostatic (or trigonal) Pouch in the Surgery of the Vesical Calculus, illustrated by several cases.

Tuesday, April 14.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. J. Scott Keltie: The Geography of Africa.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. J. H. Hutchinson (for Dr. W. B. Cheadle): Measles as a Cause of Endocarditis, being an account of four cases in which Organic Mitral Murmurs developed during the course of the disease.—Mr. W. Arbuthnot Lane: Chronic Traumatic Arthritis.

Wednesday, April 15.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, April 16.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

ROYAL INSTITUTION.—3 P.M. Professor Dewar: Recent Spectroscopic Investigations.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Mr. Edmund Roughton: A case of Hepatic Abscess implicating the Lung, Pleura, Kidney, and Colon.—Dr. Amand Routh: The Treatment of the Vomiting of Pregnancy.

Friday, April 17.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—9 P.M. Prof. A. W. Rucker: Magnetic Rocks.

Saturday, April 18.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

ROYAL INSTITUTION.—3 P.M. Prof. Silvanus P. Thompson: The Dynamo.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 9th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Apr. 3	29·61	E.	41	39	66	51	39	..	Overcast
,, 4	29·72	S.E.	45	44	66	54	40	·06	Raining
,, 5	29·60	S.W.	49	47	85	56	43	·45	Cloudy
,, 6	29·69	W.	46	44	93	60	42	·08	Cloudy
,, 7	29·70	N.	44	42	..	45	41	..	Overcast
,, 8	29·93	N.	41	37	80	49	35	..	Bright
,, 9	29·97	N.E.	42	41	50	45	40	·09	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

GENERAL PRACTITIONERS' UNION.

Beaureper, writing on this subject, says: "I can most heartily endorse every word that has been written by your correspondent, 'General Practitioner,' as to the absolute necessity for the above. The two great factors that we have to contend against are overcrowding and underselling, the one being the outcome of the other. In the town in which I reside there are two lamentable instances of the pass to which we have come. One large society, composed principally, but not entirely, of women, pays 3s. per head per annum, which includes attendance in labour. Amongst its members are included tradesmen and their wives, publicans of both sexes, and gentlemen's servants. Another glaring instance. A large cotton spinning mill pays its medical officers, of which it has no less than five, sixpence and eightpence per quarter per head. I have vainly tried to put a stop to this state of things, but am powerless, as there is no unanimity amongst us. In the Poor-law very much the same thing occurs, and guardians have no hesitation in informing the discontented medical officer that if he is not satisfied they can find plenty of men able and willing to do his work for half his pay, and I fear it is but too true. The public vaccinator has also to put up with the same competition, and is frequently told that Mr. X. only puts on two small spots for half-a-crown and calls at the people's house for the purpose, and has been known not to despise the proverbial "bob" when the larger coin has not been forthcoming. The question of collecting clubs also requires ventilation, men being frequently employed as touts to obtain members for the so-called dispensaries."

General Practitioner writes as follows on the same subject: "May I be allowed to support my statement which appeared in your issue of March 20th, that a General Practitioners' Union would be of service to the medical profession. In the legal profession there is the Incorporated Law Society, against which no lawyer dares to fight. We have no such society in the medical profession. Of course, there is the British Medical Association, but its meetings are attended chiefly by consultants and hospital surgeons, the bulk of general practitioners having too much work and too little pay to spare the time for attending. Then, again, its meetings are so much taken up with discussing matters relative to disease itself that there is little time to spare for trying to ameliorate the condition of the mass of those whose work it is to cure disease. I perfectly agree with 'M.D.' that there are 'a lot of ungentlemanly men in the profession who are willing to give their services for the smallest pittance,' but I hope these men are in the minority. It only wants unanimity on the part of the medical profession to

improve the position of general practitioners, both as regards income and as regards the respect in which they, as a body, are held by members of other professions and society at large. Let us have the Union, I say, and let us stand by one another in not allowing competition (owing to the continual increase of our numbers) to cut down the fees. There is plenty of room for us all, if we can only agree to accept fees according to a certain standard, which can be brought about by forming ourselves into a Union. Then shall we be able to put down the 'hangers-on' round our profession, bonesetters, and unqualified practitioners, and, worst evil of all, qualified men acting as 'covers' to quacks. If we are only united and determined to fight the matter out, there is little doubt of our success."

C.—A practitioner with only a surgical qualification is at a legal disadvantage in enforcing payment for services in a *medical* case. He is competent, if *registered*, to give evidence before a coroner, even in a medical case, the coroner generally contenting himself with inquiring if the witness is a registered practitioner.

Mr. John A. Sleicher (New York).—We have no special information of the waters. Application might be made to the editor of the *Wien. Med. Wochens.*, from which our account was taken.

Mrs. Piper.—A sample should be forwarded, with a statement of its composition.

B. F. P. has not enclosed his card.

HUMAN AND BOVINE SCARLATINA.

To the Editors of THE LANCET.

SIRS,—In reply to Mr. Atkinson on the above subject in your current issue, I beg to say it is with great regret that, as a country veterinary practitioner, I cannot enlighten him on those bovine diseases communicable to the higher animal which manifest themselves by "an entirely different set of symptoms," and there are three main reasons for my inability to do so:—1. The medical officer of health too frequently forms a theory that the cow is to blame, and omits to notice important sanitary facts in his zeal to saddle her with the odium of being the origin of an epidemic; or he does not seek the aid of a veterinary surgeon to elucidate the mystery of mammary ulcers, which have probably arisen from the farmer having picked off small papillomata with a very dirty thumbnail, and tried to assist the healing process by using some strong caustic. Or, if accompanied by a veterinary surgeon, he is handicapped in his scientific research by the arguments and theories of a man whose pathology has become very rusty, and who in his ignorance disbelieves in the unity of human and bovine disease. 2. The ignorance of stockowners and their fear of the Contagious Diseases Act. Many a time have I had to turn sadly away from a case which might have helped to throw light on this subject because the owner has been suspicious that my investigations were being carried on at his expense, or were likely to damage his milk trade. 3. An entirely different set of symptoms do not characterise the same disease in man and beast. Like produces like; and though there are minor differences due to difference of surrounding temperature, &c., the symptoms have much in common, and the pathogenic organisms exhibit a strong family likeness—e.g., malignant pustule of man and anthrax of sheep; consumption of man, tuberculosis of cattle.

The cow has much to be answerable for; but I fear that her human neighbours are more frequently to blame, and in their anxiety to screen themselves either wilfully or ignorantly mislead the searcher after truth.

I am, Sirs, yours obediently,

Exmouth, April 6th, 1891. FRAS. EVELYN PLACE, M.R.C.V.S.

SALICYLIC ACID AND SCARLET FEVER.

IT is stated by Dr. de Rosa, in an Italian medical journal, that salicylic acid is a valuable prophylactic in epidemics of scarlet fever. Of sixty-six children who were all exposed to the contagion, but who were given from a grain to five grains a day, sixty-three entirely escaped.

PREHISTORIC TREPHINING.

To the Editors of THE LANCET.

SIRS,—The very interesting subject of prehistoric trephining, detailed in your last issue, is pretty fully discussed in one of the "International Scientific Series"—vol. xliv., I believe, "Man before Metals," by M. Joly—and illustrated by engravings of trephined skulls. The explanation given, if I recollect rightly, is that epileptics were so treated probably to allow the demon possession to escape, and that these skulls after death of the owner were treasured as charms against the disease. As I left that part of my library in New Zealand, I cannot refer to the volume.

I am, Sirs, yours obediently,

April 4th, 1891. JOHN W. KEYWORTH.

LONGEVITY.

IN the country district of Ormskirk one of the medical practitioners discovered that the combined ages of the first five cases seen by him last Good Friday morning amounted to 402 years, the respective ages of the patients being 74, 87, 74, 74, and 93.

L.R.C.P. should refer to THE LANCET of March 21st, p. 686, as to the sale of Koch's fluid; the question of quantity may be decided by reference to the various reports of cases treated by the remedy.

A SCOTCH HOLIDAY SPOILED.

D. E.—One of the supposed charms of a medical holiday in the Western Islands of Scotland is a fancied security from summons to a midwifery case. Our correspondent's interesting letter shows that this security must not be too much relied on. His kindness in the circumstances was great, and his charges were reasonable. An emergency in such solitudes might call for the gratuitous exercise of professional talents; but to be at the mercy of violent calls by rich people, involving attendance on midwifery, crossing moors and mountains, and taking a journey of sixteen miles on a wet night, giving up holidays, sleeping a fortnight in the patient's house, and then guiding and accompanying a tender infant 200 or 300 miles by land and sea, is a risk and a sacrifice that must have their compensations. In the main we agree with our correspondent in his view of his obligation to Dr. K——. Dr. K——, being first sent for, cannot be ignored in regard to the obstetric case. But our correspondent was personally compelled, as it were, to undertake the infant's care, and did it, finding it a most onerous duty.

M.D.—We should say that our correspondent was duly engaged, and is entitled to his fee. He should have very strong evidence that a brother practitioner *knew* that he was engaged to attend the case before concluding that he was guilty of unprofessional conduct in superseding him without notice.

SYMBOLS AND INSIGNIA OF ALCHEMY, CHEMISTRY, AND MEDICINE.

To the Editors of THE LANCET.

SIRS,—A gentleman in the United States is endeavouring to make a complete collection of pictorial illustrations of the various badges and insignia that have been used in times past to characterise or distinguish the professions of pharmacy, chemistry, medicine, surgery, and the allied sciences, including alchemy. Can any of your readers assist in this matter by describing such signs as may be known to them, or referring to publications containing such particulars?

I am, Sirs, yours faithfully,

April 4th, 1891. G. W.

THE FRIENDLY SOCIETIES' MEDICAL ALLIANCE IN CONCLAVE.

THE twelfth annual Conference of the Alliance has been recently held at Wolverhampton. Mr. J. B. Cutler presided, and delegates were present from Burton-on-Trent, Gloucester, Bradford, Kidderminster, Lincoln, Leicester, Wednesbury, Stourport, York, and Wolverhampton. The President remarked with satisfaction on the more friendly spirit with which the medical faculty regarded these associations and their methods. With every wish to reciprocate friendly feeling with the President, and towards schemes for facilitating good medical attendance on working men and their families, we do not know on what facts he bases his satisfaction. The medical profession feels deeply the contemptuous estimate of its services implied in the terms of these friendly associations, which are accepted for the most part by the younger members of the profession. These terms are being commented on by the lay press, and are discreditable alike to those who offer and to those who accept them.

Messrs. Rocke, Tompsitt, & Co.—We regret we are unable to supply the address required.

CIVIL SERVICE INSURANCE SCHEME.

To the Editors of THE LANCET.

SIRS,—Your correspondent, "A Medical Civil Servant," in your issue of the 28th ult., in reference to the Civil Service Insurance Scheme, states that "all civil servants prior to appointment are submitted to a very extended medical examination; and the medical examiner is specially asked to give the benefit of any doubt he may have in regard to fitness for the service not to the individual, but to the State, and as a result only the best men are passed." Will he be so good as to say in which branches of the Civil Service this course is practised?

I am, Sirs, your obedient servant,

April 7th, 1891. INQUIRER.

PRACTITIONERS DISPENSING ABROAD.

COMPLAINTS are made that the medical men practising in sparsely populated rural districts in Alsace-Lorraine, who are allowed to supply medicines to their own patients when there is no pharmacist near, have of late been exceeding the licence they have, and that some of them systematically supply medicine when there is no difficulty in getting prescriptions made up. Some, too, it is said, even sell medicines to persons who are not their patients. The pharmacists naturally complain that their rights are being infringed, and the medical authorities have been charged to see that the law is no longer set at defiance. It is not, however, intended to take away the licence to medical men to supply medicines, as under the circumstances this would be impossible.

Rossall.—The death of Napoleon I. was caused by cancer of the stomach.

Mr W. H. Brown.—Probably next week.

ADVERTISING PRACTITIONERS IN MILE END-ROAD.

A REMARKABLE handbill, emanating from 146, Mile-end-road, announces advice and medicine 6*d.*, visit and medicine 1*s.*, by a duly qualified and registered physician and surgeon, &c. It ends with the following remarkable announcement:—"Late Dr. Hanks, Inventor and Patentee of the well-known Neuralgia and Nerve Mixture, 146, Mile-end-road." The name of no living person appears in this production, from which we infer that the author himself is not proud of his connexion with it.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Walter Foster, Edgbaston; Surgeon-General De Renzy, Dublin; Mr. Lawson Tait, Birmingham; Dr. Horrocks; Dr. Sainsbury; Dr. Mortimer Granville, London; Dr. Herman, London; Mr Hulke; Prof. Ogston, Aberdeen; Mr. W. H. Bennett, London; Messrs. Rowntree and Co., York; Dr. M. S. Wade, Victoria; Messrs. Rock, Hawkins and Co., London; Mr. Weddell, Newcastle-on-Tyne; Messrs. Burgoyne and Co, London; Dr. H. J. J. Lavis, Naples; Dr. Pierce; Dr. Wood White, Birmingham; Mr. Marshall, Huddersfield; Messrs. Legray and Co., Paris; Mr. W. H. Brown, Leeds; Messrs. Lazard Bros. and Co., London; Dr. W. Hill, London; Mr. Duke, Dublin; Mr. Haydon Brown, Edinburgh; Mr. Lawrence-Hamilton, London; Messrs. Hertz and Collingwood, London; Mr. Place, Exmouth; Messrs. Matthew Bros., London; Surgeon Sleman, London; Messrs. C. Hearson and Co., London; Mr. S. Paget, London; Messrs. Herman, Lescher, and Co., London; Dr. Dutton, London; Dr. G. Johnson; Dr. Knox, East Moseley; Mr. Blair, Leeds; Mr. Oxley, Wisbech; Messrs. Carnrick and Co., Bloomsbury; Dr. Kingsbury, Blackpool; Messrs. Baillière et Fils, Paris; Dr. Alexander, Hanwell; Messrs. Roche, Tompsit, and Co., London; Mr. Hordley, Stoke-upon-Trent; Messrs. Wright and Co., Bristol; Mr. Reeves, London; Mr. J. J. Marsh; Mr. Cleary, New York; Dr. Scatliff, Brighton; Mr. Cogan, Nottingham; Messrs. Mann and Sons, London; Dr. Keyworth, Southport; Messrs. Abbott and Barrett; M. Tissier, Paris; Mr. Mercier, London; Messrs. Keene and Ashwell, London; Mr. Sutherland, London; Mr. H. Hick, New Romney; Mr. Cocking, Sheffield; Dr. Ball, London; Senhor Corria Vaz, Oporto; Mr. G. Vickers, London; Miss Thompson, Tunbridge Wells; Dr. Wood, Wilmington, N.C., U.S.A.; Messrs. Potter and Sacker, London; Mr. H. Sell; Mr. Lyle, London; Mr. Sleicher, New York; Mr. Addiscombe, Glasgow; Messrs. Duncan, Flockhart, and Co., Edinburgh; Mr. Edwards, Birmingham; Messrs. Mason and Co., London; Mr. Wheeler, Chicago; Dr. Partington, Tunbridge Wells; Dr. Poore, London; Mr. Densham, London; Messrs. Dulau and Co., London; Mr. Davis, London; Mr. Keary, Preston; Mr. M. Smith, London; Mr. Jones, Towcester; Dr. Cooper, Mortimer; Mr. L. Browne, London; Miss Beadon, Plymouth; Messrs. Macmillan and Co., London; Mr. Brodie, Newcastle-on-Tyne; Messrs. Cochrane and Walker, Liverpool; Mr. Mangan, Kensington; Messrs. Coutela and Co., Paris; Dr. E. Blake, London; Mr. G. N. Pitt; Messrs. Deacon and Co., London; Mr. Dickson, Derbyshire; Messrs. Brown, Gould, and Co., London; Mr. G. Whitcombe, Gloucester; Messrs. Brady and Martin, Newcastle-on-Tyne; Dr. Ryley, London; Messrs. Savory and Moore, London; Dr. J. L. Steven, Glasgow; Messrs. Blondeau et Cie., London; Mr. T. F. Raven, Broadstairs; Messrs. Frazer and Co., London; Mr. Balding, Royston; Dr. Wigan, Portishead; Mr. Le Fevre, Belfast; Mr. T. Dodd, London; Mr. Kühn, London; Mr. A. Thomson, London; Mr. Saunders, Manchester; Mr. Birchall, Liverpool; Mr. A. Hodson, Brighton; Mr. Lacy, London; Dr. Becker, Milwaukie; Mr. Hamilton, Brighton; Mr. Hodgson, London; Mr. T. B. Browne, London; Mr. G. Brown, London; Mr. J. Poland; Dr. Brown, Clifton; Prof. Watson, Glasgow; Dr. Fullerton, Greenwich; Dr. B. Howard, Yokohama; Mr. S. E. Atkins, London; Dr. Piggott, Teignmouth; Dr. Hambleton, London; Dr. W. Hunter, London; Mr. T. J. Henry, Warailda; Mr. Boning, Powick; T., Homerton; M.D., Camberwell; M.R.C.P.; M.; D. E; General Practitioner; One of the Crowd; L.R.C.P.; C.; M.D.; Sussex, London; *Birmingham Daily Post*; W. B. A., London; Alpha, Manchester; M. M., London; An Old Subscriber; Secretary, General Hospital, Cheltenham; Bradford Infirmary; *Dental Record*, London; F.R C.S.I., London; Devonshire Hospital, Buxton; A. B., London; Fairplay; Geddes Manufacturing Co., London; Alpha, London; Cash, London; Spes, London; Guest Hospital, Dudley; Delta, Manchester; Surgery, London; Spes, Liverpool; Clerk, Wakefield; Inquirer.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Thorne, London; Mr. Lockwood, Eastbourne; Mr. Field; Mr. Hutchinson, Belfast; Dr. Brewis, Edinburgh; Mr. Thin, Edinburgh; Mr. Wilson, Devizes; Mr. Stranaghan, Pontypridd; Mr. Brownlow, Bolton-le-Moors; Dr. Nelson, Wandsworth; Mr. Simmonds, Newry; Mr. Tully, Hastings; Mr. Forjett, Caistor; Dr Evans, London; Dr. Richards, Ledbury; Mr. Johnston, Beds; Dr. Jones, Towcester; Messrs. Lee and Martin, Birmingham; Mr. Lewis, Swansea; Messrs. Keith and Co., Edinburgh; Dr. Keith, London; Messrs. Richardson Bros. and Co., Liverpool; Mr. Jenkins, Lincoln; Mr. Jones, Morley; Mr. W. Scott, London; Miss Symons, Southport; Mr. Heywood, Manchester; Mr. Tyte, Minchinhampton; Mr. Johnston, Burnley; Mr. Stamford, Alfreton; Dr. Irwan, co. Down; Mr. Brien, co. Dublin; Mr. Hale, Chesterfield; Mr. Richardson, Manchester; Dr. Parkinson, Sheffield; Mr. Blackburn, Barnaley; Dr. Waller, Peterboro'; Mr. A. W. Needes, London; Miss Moorhouse, London; Messrs. Paternoster and Hales, Hitchin; Mr. Charlesworth, Sheffield; Messrs. Heywood and Co., Manchester; Dr. McFarlane, co. Tyrone; Mr. Withers, Shrewsbury; Mr. Greville, Sheffield; Mr. Marshall, London; Mr. Knowles, Leeds; Mr. Waldron, Leicester; Dr. Garman, Kendal; Dr. Granville, London; Mr. Husbands; Mr. Barker, Hampstead; D. Medicinæ, London; Iota, London; R. M., London; Secretary, Medical Aid Association, Loughborough; Studens, London; Secretary, Wonford House Hospital, Exeter; K., London; Secretary, Hospital for Sick Children, Bloomsbury; Medicus, Todmorden; Lupus, London; M.B., Loughborough; Assistant, London; C. H., London; Attendant A. G., London; Y. B. J., Maida-vale; Zulu, London; Cantab, London; K., Yorks; P. E. R, London; J. W. C., London; M.B., Newcastle-on-Tyne; P. L. M., London; X. Y., Abergavenny; Mrs. H., Shepherd's-bush; C., Torpoint; Beta, London; Dunelm, London; Medicus, Edinburgh; Lupus, London; Fidelis, London; G. Y., Londan; T. R., London; Surgeon, London; Mason, London; Omega, London; Y. Z., Truro.

NEWSPAPERS.—*Auckland Star (N.Z.), The Newspaper, Liverpool Daily Post, Insurance Record, Reading Mercury, Mining Journal, West Middlesex Advertiser, Leeds Mercury, City Press, Sunday Times, Law Journal, Bristol Mercury, Builder, Broad Arrow, West Middlesex Standard, Hertfordshire Mercury, Guy's Hospital Gazette, Chemist and Druggist, Metropolitan, Spectator, Saturday Review, Surrey Advertiser, Architect, Yorkshire Post, Scottish Leader, Windsor and Eton Gazette, Pharmaceutical Journal, Cape Times, Weekly Free Press and Aberdeen Herald, Lincolnshire Chronicle, Le Temps (Paris), Western Daily Mercury, Spennymoor and Tudhoe Chronicle, Vegetarian, Windsor and Eton Express, Birmingham Daily Post, Morning Post, Maidstone Journal, Midland Evening News, Ipswich Journal, Melbourne Daily Telegraph, Cheltenham Examiner, Observer, Rangoon Gazette, East Anglican Times, Colchester Gazette, Sheffield Independent, Scotsman, Oldham Standard, Durham Chronicle, Chorley Guardian, The Queens Register (Beechworth, Melbourne), Tasmanian Mail, Pioneer Mail (Allahabad), &c.*, have been received.

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